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WISCONSIN STATE TOTAL



INDUSTRIAL
AND OCCUPATIONAL

PROJECTIONS TO 1995

LABOR MARKET **LN** INFORMATION



WISCONSIN
INDUSTRIAL AND OCCUPATIONAL PROJECTIONS TO 1995

Prepared by
The Bureau of Labor Market Information
Division of Employment and Training Policy
Department of Industry, Labor and Human Relations
State of Wisconsin

September, 1987

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TO: WISCONSIN PUBLIC OFFICIALS, EDUCATORS AND EMPLOYMENT PROGRAM PLANNERS

I am pleased to introduce the Wisconsin Industrial and Occupational Projections to 1995. This publication represents a series of firsts for the Wisconsin Occupational Employment Statistics (OES) program, and we are proud to be one of the first states in the nation to present the results of this program to you.

The OES survey has now completed a three-year cycle based on a new nationwide taxonomy, the Standard Occupational Classification (SOC) system. This system, designed through the 1970's, is a skill-based coding system which relates occupations of a like nature.

The OES Matrix aligns occupations by industry, making a gridwork of over 250,000 cells. This matrix is moved from the base year to the projected year using a variety of statistical techniques.

The OES projections are made by economists and analysts who are knowledgeable about Wisconsin industry. These projections are then applied to the matrix to determine the movement of industries and their occupations to 1995.

The occupational-industrial projections are now able to be run on a minicomputer housed in our Labor Market Information Bureau, which enables us to project data for the state of Wisconsin and its 17 Service Delivery Areas.

This very sophisticated tool now enables us to relate this information directly and immediately to educators and trainers.

A number of educators and policy-makers served on the panel of experts we established to assess future work force needs, and we appreciate their help. Gerald Snow and Thomas Rondou of the Employment and Training Policy Division served as principal researchers in this effort, and their contributions are also appreciated. Readers who are interested in more detail may contact Mr. Snow at (608) 266-0230 or Mr. Rondou at (608) 266-0689.

Please let us know of your reactions to this report.

Yours very truly,

John T. Coughlin

John T. Coughlin
Secretary

EXECUTIVE SUMMARY

The number and kinds of workers needed in Wisconsin in 1995 will depend on the interplay of demographic, economic, social, and technological factors which shape the state's economy. Changes in these factors affect both the demand for goods and services and the supply of those looking for work. Moreover, some occupations will grow much faster than others as the demand for the goods and services they produce increases. Other occupations will decline in importance or even disappear as the adoption of new technologies change the way in which goods and services are produced, sold, and distributed. In addition, global changes in the economy and in national economic policy can all be expected to play a role in determining the future demand for labor in Wisconsin.

Changes in the overall age structure of Wisconsin's population mirror those occurring at the national level. The two most important factors influencing this shift in the composition of the state's population are the rapid and prolonged increase in the number of births occurring at the end of the second World War and continuing into the 1960's--the baby boom--and the sharp decrease in the number of births occurring in the late 1960's and continuing through the 1970's--the baby bust. Because these events were not just local but national in scope they continue to affect the overall numbers of people who can participate in the labor force. The number of people reaching school leaving age will continue to drop through 1990 as the youngest of the baby bust group turn 15. The number of persons in the prime working age group--ages 25 to 54--will continue to grow, however, until about 2010 when the youngest members of the baby boom turn 55 years of age.

The state's labor force will continue to grow by slightly less than one percent per year between 1985 and 1990. Given the shrinking pool of new entrants to the labor force as more people born during the baby bust begin to seek paid work, sustaining even this slower rate of labor force expansion will require a smaller net outmigration of workers.

Changes in educational attainment, potential earning power, and family structure, for instance, have profoundly changed the numbers of women seeking paid employment over the last twenty-five years and will continue to change the make up of the labor force over the next several decades as well. The number of women in the labor force will continue to grow about three times faster than will the number of men. Women seeking work in the state's labor market will account for between 70 and 80 percent of the increase in the labor force. As a consequence, by 1995 women will account for about eighty percent of the growth in the labor force and for about 47 percent of the state's total labor force.

Total employment in Wisconsin is expected to increase by 235,000 jobs in the nonfarm wage and salary portion of the labor force between 1985 and 1995. Employment in this portion of the labor force averaged 1,976,800 in 1985 and is expected to grow to 2,212,200 by 1995. Job growth at this level would constitute a nearly 12 percent increase over the decade or an increase of about 1.1 percent in the number of jobs in the nonfarm wage and salary sector each year. This projected rate of job growth for the decade is two to three times faster than that experienced between 1980 and 1985, but would be only half the rate at which jobs have been added to the state's economy between 1960 and 1985.

The Bureau of Labor Market Information expects nonfarm wage and salary employment to continue to grow in all major industry groupings in the state's economy. In 1985, about one-third of all jobs were in the goods producing sector of the economy and two-thirds were in the service providing sector. By 1995, employment in the goods producing sector of the state's economy will drop to one-quarter of total employment. Nearly three out of every four workers in the state will be employed in some facet of the service sector.

Rates of growth in all major industrial groups are expected to remain the same or fall slightly over the next ten years. **Manufacturing** is expected to continue adding new workers through the mid-1990's, but at a much slower rate than any of the service sector groups except **Transportation, Communications, and Public Utilities**. Most new jobs will continue to come from expansion in **Trade and Services**.

Over the last twenty-five years the rapid expansion of service sector employment and relative stagnation of manufacturing employment have profoundly altered the state's occupational structure, increasing the number of workers in **professional, paraprofessional, and technical** occupations and in **sales and service** occupations at the expense of those in **clerical and administrative support** occupations and in **production, operative, and maintenance** occupations. Despite continued growth expected in the overall service providing portion of the state's economy, the distribution of employment by major occupational group in the state is expected to change only marginally between 1985 and 1995 as low growth rates in larger occupational categories are balanced out by slower growth in smaller categories.

Most new jobs in Wisconsin's economy over the next ten years will be found in the **professional, paraprofessional, and technical** occupations, the **service** occupations, and the **production, operative, and maintenance** occupations. These categories will be responsible for adding nearly 70 percent of all new jobs to the economy between 1985 and 1995 in roughly equal shares. Employment in **sales and related occupations** will add 13 percent of the new jobs, **managerial and administrative** occupations 7 percent, and **clerical and administrative support** occupations 13 percent.

The fastest growing occupations in Wisconsin and in the country as a whole tend to be **professional, paraprofessional, and technical** jobs. Most of these fast growing technical occupations are concentrated in the rapidly growing **business services** and **health care** industries in the state.

Most new openings in an occupation arise from the need to replace workers who have left the occupation. Such openings arise as workers leave one occupation to pursue another, become unemployed, or leave the labor force altogether through retirement or return to school, housekeeping, or other pursuits. Overall, about three out of every four new job openings in the state's economy will be created by the need to replace workers in existing jobs.

Most new openings in Wisconsin over the next ten years will be found in the **production, operative, and maintenance** occupations, the **service** occupations, the **professional, paraprofessional, and technical** occupations, and the **clerical and administrative support** occupations. Labor force separations in each of these categories will account for annual average openings of more than 10,000 jobs.

Although employment in most occupations in the state is expected to increase, the number of jobs available in about six percent of the job categories is expected to decline somewhat. This would represent an overall loss of about 6,700 jobs in these 45 occupations between 1985 and 1995. Although most of the categories expected to experience job losses are in the **production, operative, and maintenance** occupations, some **clerical** occupations such as **stenographers, data entry keyers, payroll and timekeeping clerks, file clerks, and stock clerks** are also likely to be hard hit. Technology change, particularly the adoption of production and office automation technology, is expected to alter the kinds of skills needed in the workplace. Other factors which influence the decline in employment include import competition, demographic changes, and changes in consumer tastes. Thus, while we expect some kinds of production and clerical occupations to decline, other, more skilled occupations within these groups will be growing as described above.

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INTRODUCTION

Estimates of current and projected employment by industry and occupation provide information to business planners, policy makers, managers of employment and training programs, educational planners, and job seekers to assist in making decisions. Each of these groups not only need to know what kinds of jobs are currently available in the state, but also need estimates of future occupational demand to evaluate investment or policy alternatives. Educators and students, for example, need data on occupational outlooks to make sound decisions about programs of study. Managers of job training and retraining programs need employment projections to identify, design, and implement appropriate curricula. Policy makers need information on industrial and occupational outlooks to evaluate alternative strategies for economic development. Similarly, business planners need this information to evaluate alternative business opportunities. This report assembles in one document population, labor force, industrial, and occupational projections for the State of Wisconsin. To aid the reader in understanding and interpreting these projections, the report also includes information on the views of economists and planners about expected changes in the world of work in Wisconsin over the next ten years.

Creating industrial and occupational projections is a complex and time consuming task. It begins with the assembling of data about the state's population, labor force participation, and estimates of industry employment and occupational staffing patterns. These data come from a variety of surveys and administrative data collection efforts conducted by the Wisconsin Department of Industry, Labor and Human Relations (DILHR) and the Wisconsin Department of Administration. Analyses of these data provide the Bureau of Labor Market Information in DILHR with estimates of current conditions and historical trends. Analysts in the Bureau of Labor Market Information use these estimates to develop labor force and industrial projections for the state. A panel of economists and business planners familiar with Wisconsin's economy reviewed the projections and the Bureau staff then develop occupational projections based on a best estimate about economic conditions and expected growth in the state.

Advances in data processing technology, particularly the development over the last several years of desk top computing, has revolutionized the way the Bureau of Labor Market Information creates industrial and occupational projections for the state. Research analysts in the Bureau, using new complex and sophisticated software, can now estimate a number of alternative projections of industry employment based on different assumptions about population growth and labor force estimates for the target year. As one of four test sites for this software developed by the Utah Department of Employment Security, the State of Wisconsin remains in the forefront in developing labor market information resources for its citizens.

This publication contains four major sections. Chapter 1 provides information about population and labor force projections to 1995 for the state. The expected changes in the state's population provide indicators of both the future demand for goods and services and the size and composition of the state's future labor force. Chapter 2 provides industrial projections to 1995 for the state. This section presents information about economic and industrial trends in the state, the divergent views about the future of the world of work held by our projections review panel, and the industrial projections themselves. Chapter 3 provides occupational projections to 1995 for the state. This section provides estimates of new job creation and replacement needs in the labor market to provide an indication of total expected openings by occupation. The section also highlights occupational categories that are expected to grow most rapidly, to decline, or to provide the most new openings over the decade. In addition, this section presents estimates of current and expected employment in technologically intensive industries and occupations in the state. Chapter 4 completes the report by describing the methodology and data sources used in constructing the industrial and occupational projections.

No single data source is without its limitations. Wisconsin's economy is tied closely to that of the nation and the world. Conditions in these national and global markets may change relative to our expectations. Therefore, data in this publication should be viewed as indicators of trends and used to make comparisons among occupations.

ACKNOWLEDGMENTS

This publication would not have been possible without the help, cooperation, and encouragement of the staff and management of the Employment and Training Policy Division in the Department of Industry, Labor and Human Relations (DILHR). The Bureau of Systems and Data Processing in DILHR also helped considerably with our task.

Funding for this project was provided by the United States Department of Labor, Employment and Training Administration in cooperation with the Bureau of Labor Statistics. Funding for the acquisition of the computer programs used in carrying out this project and training for their use was provided by the Wisconsin Occupational Information Coordinating Council through a grant from the National Occupational Information Coordinating Committee. Additional technical support for computer program development and training was provided by the Interstate Conference of Employment Security Agencies, Inc. and the National Governors' Association.

PROJECTION PANEL PARTICIPANTS

Projecting labor market conditions is an art, not a science. Despite our ability to collect and process massive amounts of data, the projections process is not a mechanical exercise of extrapolating past trends into the future. Critical to this process has been the review and comments provided by our panel of economists and analysts knowledgeable about Wisconsin's economy. Members of this group included:

Franz Backus, Wage Record Planner, Unemployment Compensation Division, Department of Industry, Labor and Human Relations

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CHAPTER 1

Population and Labor Force Projections

The number and kinds of workers needed in Wisconsin in 1995 will depend on the interplay of demographic, economic, social, and technological factors which shape the state's economy. Changes in these factors affect both the demand for goods and services and the supply of those looking for work. Changes in educational attainment, potential earning power, and family structure, for instance, have profoundly changed the numbers of women seeking paid employment over the last twenty-five years and will continue to change the make up of the labor force over the next several decades as well. Moreover, some occupations will grow much faster than others as the demand for the goods and services they produce increases. Other occupations will decline in importance or even disappear as the adoption of new technologies change the way in which goods and services are produced, sold, and distributed. In addition, global changes in the economy and in national economic policy can all be expected to play a role in determining the future demand for labor in Wisconsin.

This chapter focuses on projected changes in Wisconsin's population and labor force. These changes in the state's population will have a twofold affect. On the one hand, population changes will influence the demand for different kinds of goods and services through changes in consumption patterns by different age groups. Changes in the overall demand for housing, education, medical services, and consumer goods, for instance, are likely to occur as the number of younger people in the state continues to drop while the elderly population continues to increase. On the other hand, changes in the size and composition of the state's population also affect the number and characteristics of people looking for work. This in turn influences both the competition for jobs and training opportunities and the expected productivity of the labor force.

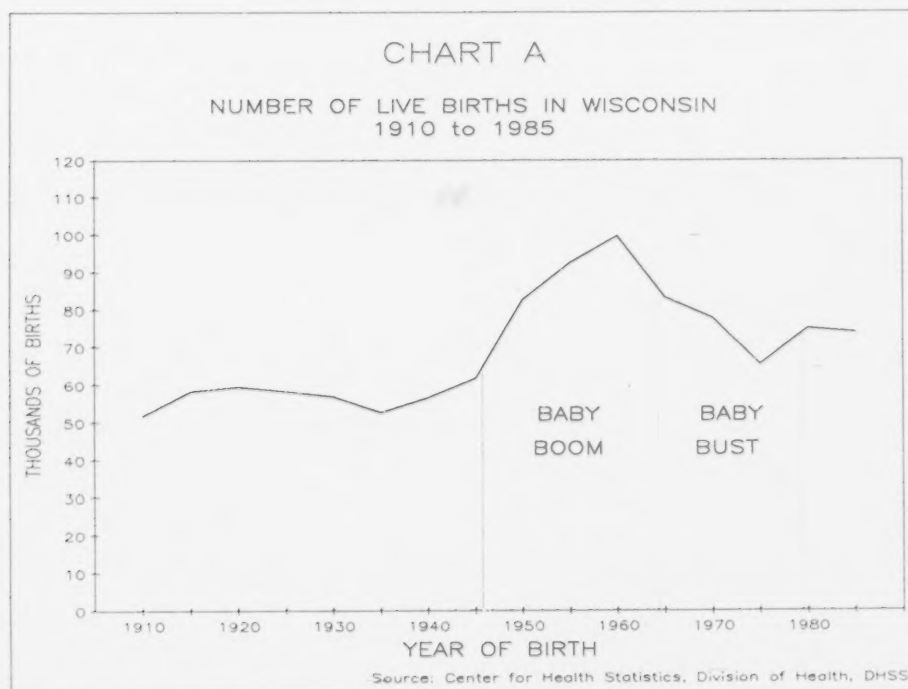
The chapter is divided into four sections: Section A describes the current composition of the state's population and presents population projections developed by the staff of the Center for Demographic Studies in the Wisconsin Department of Administration; Section B describes long term trends in the rates of labor force participation by different age groups for men and women; Section C presents labor force projections for Wisconsin to 1995 based on the material presented in the previous two sections; Section D provides estimates of employment and unemployment for the labor force projections described in Section C.

1.A. POPULATION PROJECTIONS FOR 1995

Wisconsin had an estimated total population of 4,802,250 in 1987 which represents an increase of two percent over the state's population measured by the census in 1980. The annual rates of increase in the 1980's have averaged less than one-third of one percent. This represents relatively slow growth when compared to Wisconsin's average annual growth rates of .65 percent in the 1970's and 1.18 percent in the 1960's. Although the state's total population has been growing very slowly in recent years, the age composition of the population has changed considerable over the last several decades and is expected to continue to do so for the foreseeable future.

Changes in the overall age structure of Wisconsin's population mirror those occurring at the national level. The two most important factors influencing this shift in the composition of the state's population are the rapid and prolonged increase in the number of births occurring at the end of the second World War and continuing into the 1960's--the baby boom--and the sharp decrease

in the number of births occurring in the late 1960's and continuing through the 1970's--the baby bust. Because these events were not just local but national in scope they continue to affect the overall numbers of people who can participate in the labor force. The baby boom, of course, had an immediate impact on the state and national economies as unprecedented numbers of children entered school. Between 1970 and 1980, the baby boom induced bulge in school enrollments shrank dramatically as members of the group left or completed school and entered the labor force to be followed in school by the much smaller group born during the baby bust. The baby boom and subsequent baby bust is depicted in the following chart of the number live births in Wisconsin reported by the Center for Health Statistics, Division of Health, Wisconsin Department of Health and Social Services.



Age in 1987:	77	72	67	62	57	52	47	42	37	32	27	22	17	12	7	2
Age in 1990:	80	75	70	65	60	55	50	45	40	35	30	25	20	15	10	5
Age in 1995:	85	80	75	70	65	60	55	50	45	40	35	30	25	20	15	10
	1910	1920	1930	1940	1950	1960	1970	1980								
YEAR OF BIRTH																

Below the chart we have indicated the age in 1987, 1990, and 1995 of persons born at five year intervals between 1910 and 1985. From the chart we can determine that those born in 1925, for example, would be 62 years old in 1987. Those born at the peak of the baby boom, about 1960, would be about 27 years old in 1987 and 35 years old in 1995. Between 1970 and 1980, the bulge from the baby boom moved into the 20 to 34 year old age group. By 1985, the bulk of the baby boom had moved into the 25 to 44 year old age range. By 1995, the population bulge will shift to the 35 to 54 year old age group.

As Chart A indicates, the number of people reaching school leaving age will continue to drop through 1990 as the youngest of the baby bust group turn 15. The number of persons in the prime working age group--ages 25 to 54--will continue to grow, however, until about 2010 when the youngest members of the baby boom turn 55 years of age.

TABLE 1

WISCONSIN POPULATION PROJECTIONS BY AGE AND SEX

Age Categories	1980		1985		1990		1995	
	Males	Females	Males	Females	Males	Females	Males	Females
expected births	188,808	180,091	194,901	185,903	187,142	178,501		
00-04	178,106	168,825	186,581	178,705	196,264	187,740	187,623	179,305
05-09	176,838	167,956	177,559	167,773	189,323	180,762	198,215	189,358
10-14	200,628	191,607	173,131	164,872	176,982	167,663	189,577	181,282
15-19	235,729	230,869	193,424	186,363	169,972	163,278	175,018	167,243
20-24	224,245	225,772	222,553	219,730	186,019	180,667	164,677	159,455
25-29	202,269	199,637	216,752	217,481	219,034	215,546	184,404	178,520
30-34	174,492	173,613	197,524	195,604	215,485	216,932	219,316	216,543
35-39	134,816	136,835	169,538	168,781	195,393	193,635	214,695	216,324
40-44	114,326	115,978	130,742	132,472	167,426	166,417	194,362	192,323
45-49	108,397	111,461	110,098	111,970	128,281	130,281	165,532	164,902
50-54	114,757	118,315	102,381	106,411	105,984	108,904	124,506	127,706
55-59	110,275	118,765	106,330	111,834	96,650	102,432	100,900	105,607
60-64	96,828	110,115	99,761	111,138	98,110	106,565	89,970	98,345
65-69	84,317	100,402	85,680	103,257	88,541	104,344	87,307	100,132
70-74	62,949	82,742	69,529	91,396	71,035	94,287	73,700	95,494
75-79	43,288	64,278	47,197	71,675	52,671	79,727	54,271	82,735
80-84	25,539	45,037	28,324	50,284	31,404	56,955	35,479	64,067
85-89	12,416	25,524	13,266	29,093	15,181	33,650	17,220	39,115
90-94	4,191	9,867	4,732	12,586	5,326	15,157	6,361	18,313
95 & over	959	2,679	1,309	3,914	1,650	5,562	2,009	7,353
Subtotal	2,305,365	2,400,277	2,336,411	2,435,339	2,410,731	2,510,504	2,485,142	2,584,122
Total		4,705,642		4,771,750		4,921,235		5,069,264

Source: Wisconsin Department of Administration, Demographic Services Center (3/86)

The population projections shown in Table 1 were developed by the Demographic Services Center, Wisconsin Department of Administration. The estimates were calculated by aging the number of live births, by using mortality tables to subtract expected deaths, and by estimating new migration into or out of the state. The table shows the estimated population of the state by five year age groups in 1980, 1985, 1990, and 1995. As Table 1 indicates, the state's total population is expected to continue to grow through 1995. At that time, the state's population is likely to total more than five million inhabitants. The projections indicate that in 1995, males will slightly out-number females up to age 50. Longer life expectancies for older women in 1995, however, will result in women slightly out-numbering men in the state overall.

Population change occurs not only through births and deaths, but also through migration. Although there is a steady stream of migrants both in to and out of the state, net migration in Wisconsin has usually been a very small component of overall population change in the state for several decades. About 101,000 more people left the state between 1980 and 1985 than entered it. There was no net change in the state's population due to migration by people ages 65 and over. There was, however, a net increase of about 15,000 people age 15 and under and a net loss of about 115,000 to 120,000 people between the ages of 16 and 64. Earlier projections by the state's demographers had estimated that the portion of the population 16 years of age and older would grow by about 1.3 percent per year. Instead, larger than expected out migration due to changing social and economic conditions actually resulted in annual rates of population growth by this group of about .66 percent or about one half of that anticipated.

In making their projections to 1990, the staff of the state Demographic Services Center is assuming that about 22,000 more people will leave the state than enter between 1985 and 1990. Out migration by people age 16 to 64 will result in a net loss of about 29,000 residents, while continued immigration by children 15 and under will contribute a net gain of about 7,000 new younger residents to the state. As Table 2 indicates, the state's population is expected to grow by about .6 percent per year between 1985 and 1990. The number of those in the working age group (16 years of age and older) are expected to grow at about the same annual rate of .6 percent as the total population. This rate of growth is only slightly smaller than that experienced during the previous five years between 1980 and 1985. Without the expected net population loss due to outmigration, the natural rate of population growth would be a maximum of .8 percent per year.

The state's demographers expect virtually no population gain or loss due to migration between 1990 and 1995. Instead, the population of the state is expected to continue to grow at about the .6 percent per year level that has prevailed since 1980.

TABLE 2

WISCONSIN POPULATION PROJECTIONS:
RATES OF CHANGE BY AGE AND SEX

Age Categories	Population:					Change in Population:				Compound Annual Rate of Change:			
	1970	1980	1985	1990	1995	1970-80	1980-85	1985-90	1990-95	1970-80	1980-85	1985-90	1990-95
TOTAL	4,417,731	4,705,642	4,771,750	4,921,235	5,069,264	287,911	66,108	149,485	148,029	0.633	0.279	0.619	0.594
Male	2,167,373	2,305,365	2,336,411	2,410,731	2,485,142	137,992	31,046	74,320	74,411	0.619	0.268	0.628	0.610
0 - 4	195,389	178,106	186,581	196,264	187,623	(17,283)	8,475	9,683	(8,641)	-0.922	0.934	1.017	-0.896
5 - 15	524,578	424,612	389,375	400,299	422,796	(99,966)	(35,237)	10,925	22,496	-2.092	-1.718	0.555	1.100
Male 16+	1,447,406	1,702,647	1,760,455	1,814,168	1,874,723	255,241	57,808	53,712	60,556	1.637	0.670	0.603	0.659
16 - 19	171,128	188,583	154,739	135,978	140,014	17,455	(33,844)	(18,762)	4,037	0.976	-3.879	-2.552	0.587
20 - 24	158,146	224,245	222,553	186,019	164,677	66,099	(1,692)	(36,534)	(21,342)	3.554	-0.151	-3.523	-2.408
25 - 34	250,971	376,761	414,276	434,519	403,720	125,790	37,515	20,243	(30,799)	4.146	1.917	0.959	-1.460
35 - 44	232,854	249,142	300,280	362,819	409,057	16,288	51,138	62,539	46,238	0.678	3.804	3.856	2.428
45 - 54	232,289	223,154	212,479	234,265	290,038	(9,135)	(10,675)	21,786	55,773	-0.400	-0.976	1.971	4.364
55 - 64	195,315	207,103	206,091	194,760	190,870	11,788	(1,012)	(11,331)	(3,890)	0.588	-0.098	-1.125	-0.403
65 +	206,703	233,659	250,037	265,808	276,347	26,956	16,378	15,771	10,539	1.233	1.364	1.231	0.781
Female	2,250,358	2,400,277	2,435,339	2,510,504	2,584,122	149,919	35,062	75,165	73,618	0.647	0.290	0.610	0.580
0 - 4	186,838	168,825	178,705	187,740	179,305	(18,013)	9,880	9,035	(8,435)	-1.009	1.144	0.991	-0.915
5 - 15	502,389	405,737	369,918	381,081	404,089	(96,652)	(35,819)	11,163	23,008	-2.114	-1.832	0.596	1.179
Female 16+	1,561,131	1,825,715	1,886,716	1,941,683	2,000,728	264,584	61,001	54,967	59,045	1.578	0.659	0.576	0.601
16 - 19	170,420	184,695	149,090	130,622	133,794	14,275	(35,605)	(18,468)	3,172	0.808	-4.193	-2.610	0.481
20 - 24	178,952	225,772	219,730	180,667	159,455	46,820	(6,042)	(39,063)	(21,212)	2.351	-0.541	-3.839	-2.467
25 - 34	255,476	373,250	413,085	432,478	395,063	117,774	39,835	19,393	(37,415)	3.864	2.049	0.922	-1.793
35 - 44	237,392	252,813	301,253	360,052	408,647	15,421	48,440	58,799	48,595	0.631	3.568	3.630	2.564
45 - 54	243,642	229,776	218,381	239,185	292,608	(13,866)	(11,395)	20,804	53,423	-0.584	-1.012	1.837	4.114
55 - 64	209,087	228,880	222,972	208,997	203,952	19,793	(5,908)	(13,975)	(5,045)	0.909	-0.522	-1.286	-0.488
65 +	266,162	330,529	362,205	389,682	407,209	64,367	31,676	27,477	17,527	2.190	1.847	1.473	0.884

Source: Data from Wisconsin Department of Administration, Demographic Services Center (3/86);
Analysis of change by Bureau of Labor Market Information, DILHR (10/86)

1.B. LABOR FORCE PARTICIPATION

Labor force projections depend upon the projected population and upon the proportion of the working age population that will be looking for work or working. This proportion is called the labor force participation rate. Over the last thirty years there has been a decrease in the participation rate among men and an increase in the participation rate for women. These trends are expected to continue.

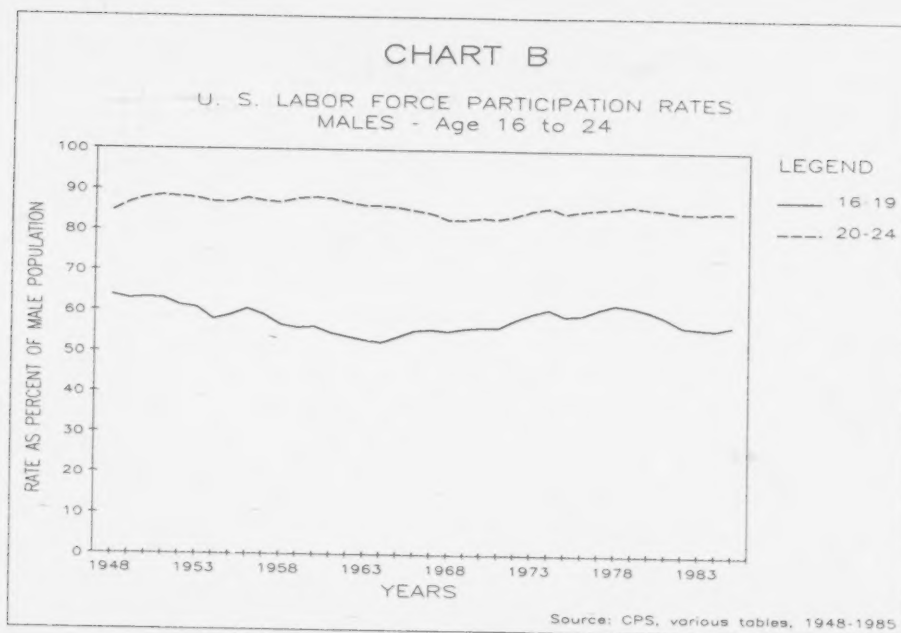
TABLE 3

LABOR FORCE PARTICIPATION RATES IN WISCONSIN (Rate as a percentage of population)

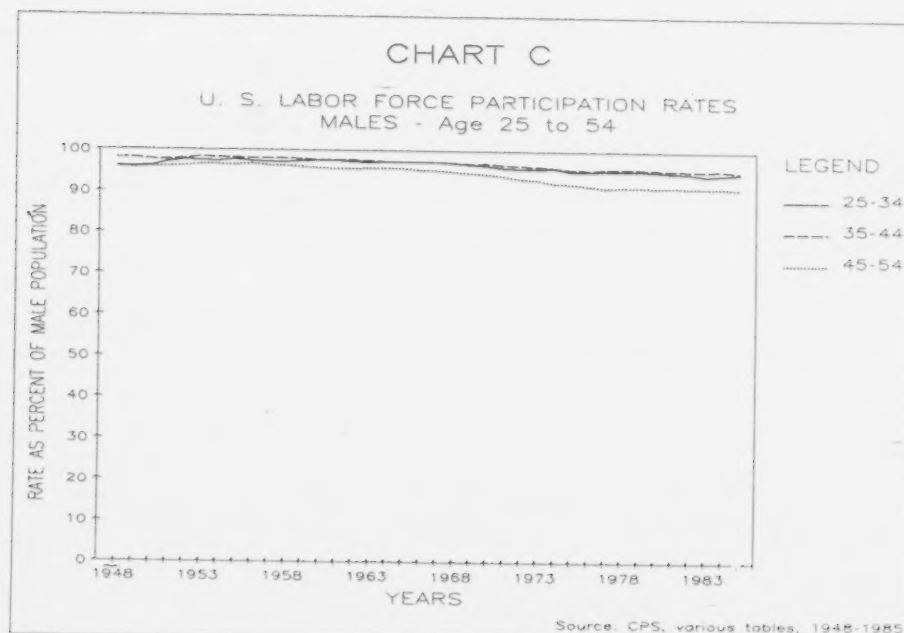
Age Categories	1970	1980	1985	1990	1995
Male					
16-19	51.4	58.0	57.4	56.7	56.7
20-24	80.0	84.1	84.7	85.3	85.7
25-35	95.3	94.5	94.2	93.9	93.5
35-44	96.4	95.9	95.6	95.2	94.8
45-54	94.7	93.3	92.8	92.3	91.7
55-64	84.0	75.5	70.1	64.7	61.5
65 +	25.2	17.8	15.1	12.4	10.6
Female					
16-19	41.9	54.6	55.1	55.6	58.1
20-24	59.6	72.4	73.9	75.3	79.6
25-35	44.2	67.1	71.4	75.7	84.8
35-44	50.7	68.5	71.4	74.2	80.8
45-54	54.3	63.3	69.1	74.8	78.5
55-64	44.6	44.9	45.4	45.9	47.4
65 +	10.6	7.8	7.3	6.8	6.4

Source: DILHR: Bureau of Labor Market Information Projections for 1985-95 (10/86);
U.S. Census of Population for 1970 and 1980.

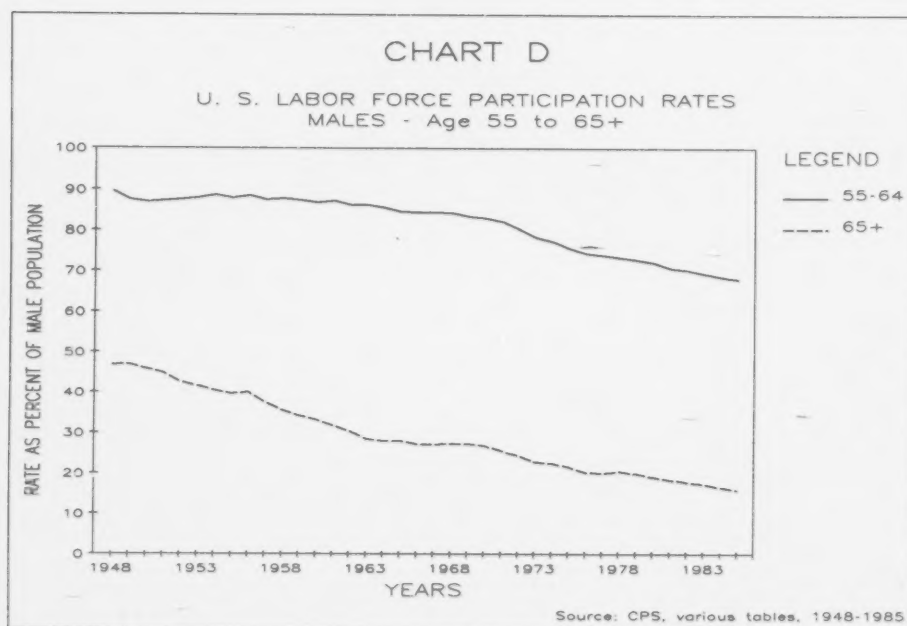
For the nation as a whole, the labor force participation rates for men aged 16 to 19 and 20 to 24 have not changed much during the past fifteen years. The Wisconsin rates in 1980 were at or above the 1950 rates. With fewer people in these younger age groups, there should be more competition among employers attempting to fill the kinds of jobs that traditionally employ students. The increased availability of these jobs and increasing costs for education may cause the labor force participation rates of youth to rise, but little overall change is projected.



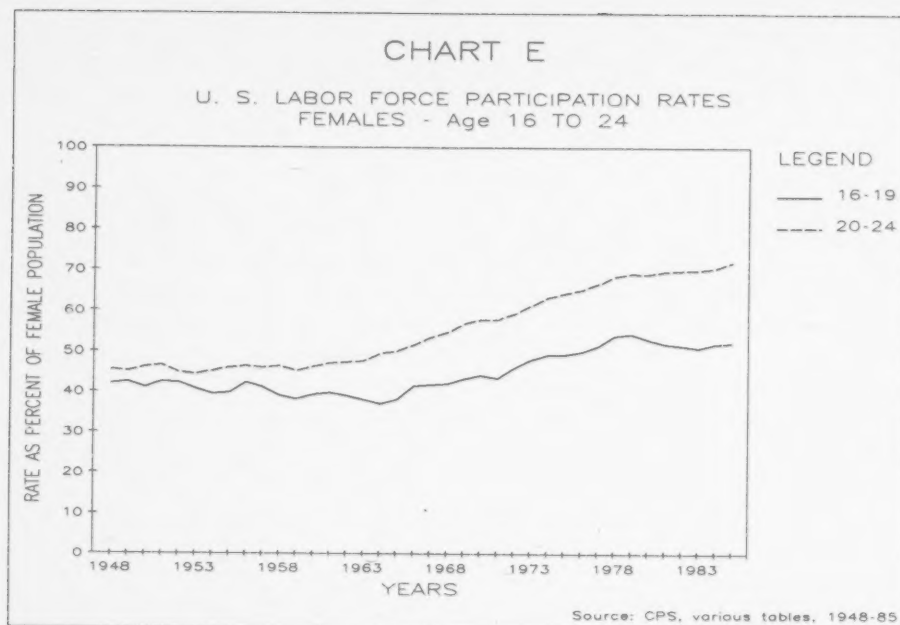
The labor force participation rates for men aged 25 to 54 have been decreasing since the late fifties. The decrease in participation rates for men aged 45 to 54 has been significant for Wisconsin as well as the United States. The Bureau of Labor Market Information expects that these trends will continue.



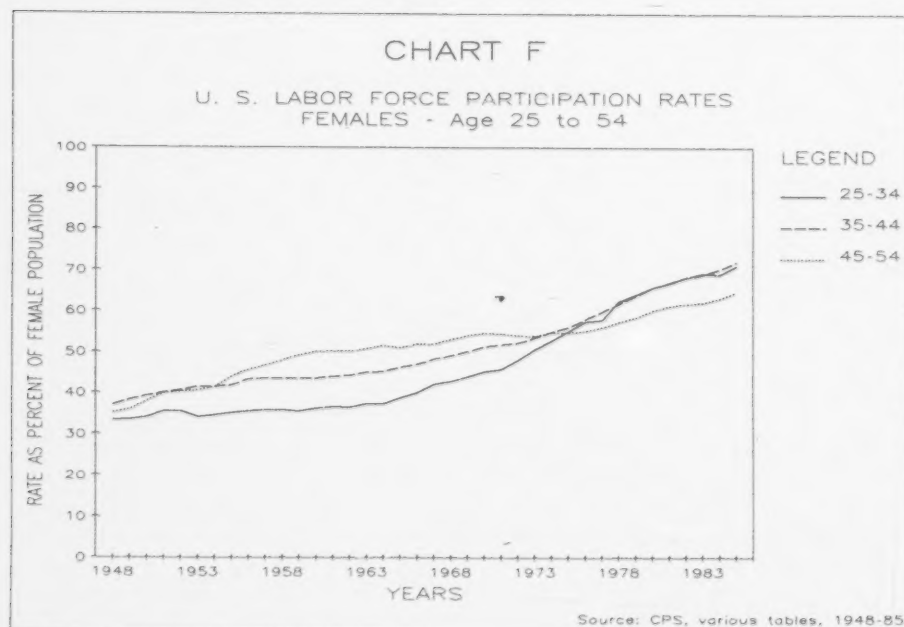
Over the last thirty years the labor force participation rates for men aged 55 and over have declined dramatically. In 1950 over 40.0 percent of the men age 65 and over were in the labor force. The best estimate for 1985 is that about 15.0 percent of all men age 65 and older were in the labor force. Much of this decline can be attributed to increased availability and adequacy of pension and retirement benefits. Improvements in overall health and longevity of older persons in our society have also contributed to this decline. In addition, some would be older workers lost their jobs and left the work force involuntarily as part of the process of economic restructuring occurring not just in Wisconsin, but in the country as a whole. This decline is projected to continue, partly because of the pressure from the younger workers seeking to move into the jobs held by older workers and partly because older workers still tend to be concentrated in industries and occupations which are shrinking.



The national labor force participation rate for women aged 16 to 19 was about 53.0 percent in 1980 and 52.0 percent in 1985. The U.S. Bureau of Labor Statistics projects a small decline to 51.0 percent by 1995. The Wisconsin participation rate was about 55.0 percent in 1980. We expect an increase in participation by women in this younger age group due to the continued availability of part-time jobs for students and the decline in the number of young people available to fill them. The participation rate for women 20 to 24 years old has been increasing since about 1960 and we expect it to continue to do so.

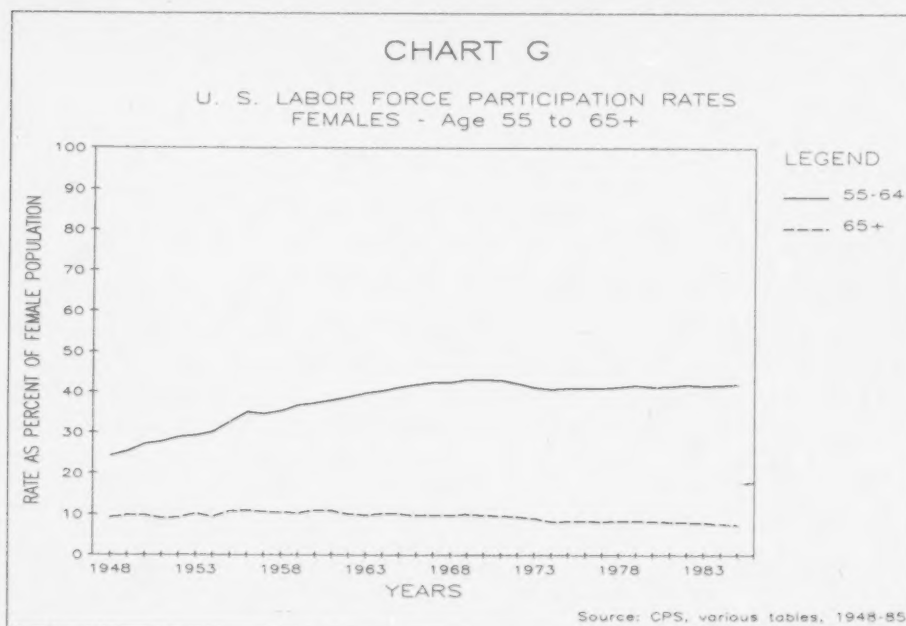


The labor force participation rate of women aged 25 to 54 has been increasing and will continue to increase. The rate of increase for women ages 25 to 34 was slow until almost 40 percent were in the labor market. At that point in the mid-sixties, paid participation in the labor force by mothers of young children became much more socially acceptable. Moreover, improvements in fertility control, advances in educational attainment, and efforts to mitigate gender-based discrimination in the workplace coincided in the late sixties, resulting in labor



force participation rates increasing rapidly for all working aged women. As these working women age and as others, who are not working because they are caring for young children, enter the labor force, we expect continued increases in the participation rates of women ages 35 to 54.

Growth in the participation rate for women aged 55 to 64 seems to be leveling off. As more younger women with longer histories of labor force attachment reach the 55 to 64 age group, labor force participation rates for this group might increase as more of them choose to continue with their careers. Alternatively, because these younger groups of women with their longer work histories are more likely to have accumulated greater pension and retirement benefits than are women in this age group today labor force participation by this age group might decline. The participation rate for women age 65 and over is roughly half the rate for men. There are, however, almost as many women working as men in this age group because women live longer.



1.C. LABOR FORCE PROJECTIONS

Changes in the size and composition of Wisconsin's labor force over the next ten years will depend not only on changes in the age distribution of the state's population and in its residents' desire to seek paid employment, but also in their ability to find it. Growth in the overall economy of the state will draw more current residents into the labor force. Similarly, if the state's economy outperforms those of other states, Wisconsin's labor force could attract larger numbers of immigrants than is currently expected. Conversely, if the state's economy performed worse than is expected, fewer people would be likely to enter the labor force or to actively seek work if unemployed, while others would be more likely to leave through early retirement or to migrate to other parts of the country.

The unusually rapid growth of the state's labor force between 1970 and 1980, for example, occurred as persons born during the baby boom left school and began seeking work. An expanding economy in the state during much of this period provided jobs for an ever increasing pool of participants as the labor force grew by a rapid 2.6 percent per year. Not surprisingly, as the overall number of people seeking work grew, not all were able to find it. Thus, while the ranks of the employed grew by 415,000, those of the unemployed grew by 95,700. During this period women accounted for three out of every five new entrants to the labor market, as expanded opportunities to work coupled with increasing educational attainment, control over their fertility, and anti-discrimination efforts combined to encourage women of all ages to enter or reenter the work force.

Between 1980 and 1985 Wisconsin's labor force grew more slowly than in the preceding ten years. A period of economic recession with its attendant high unemployment and a drop in the size of the pool of new entrants combined to produce labor force growth of slightly less than one percent per year for the population as a whole. Women still continued to enter the labor force in record numbers during this period, but the number of men entering the labor market during this period grew by only about one-half of one percent. Net outmigration accounted for some of the slow growth. Not only were more workers from Wisconsin seeking employment elsewhere, but news of a downturn in the manufacturing sector of the state's economy led fewer people than normal from other states to seek work in Wisconsin.

We expect that the state's labor force will continue to grow by slightly less than one percent per year between 1985 and 1990. Given the shrinking pool of new entrants to the labor force as more people born during the baby bust begin to seek paid work, sustaining even this slower rate of labor force expansion will require a smaller net outmigration of workers.

TABLE 4
CIVILIAN LABOR FORCE ESTIMATES FOR WISCONSIN

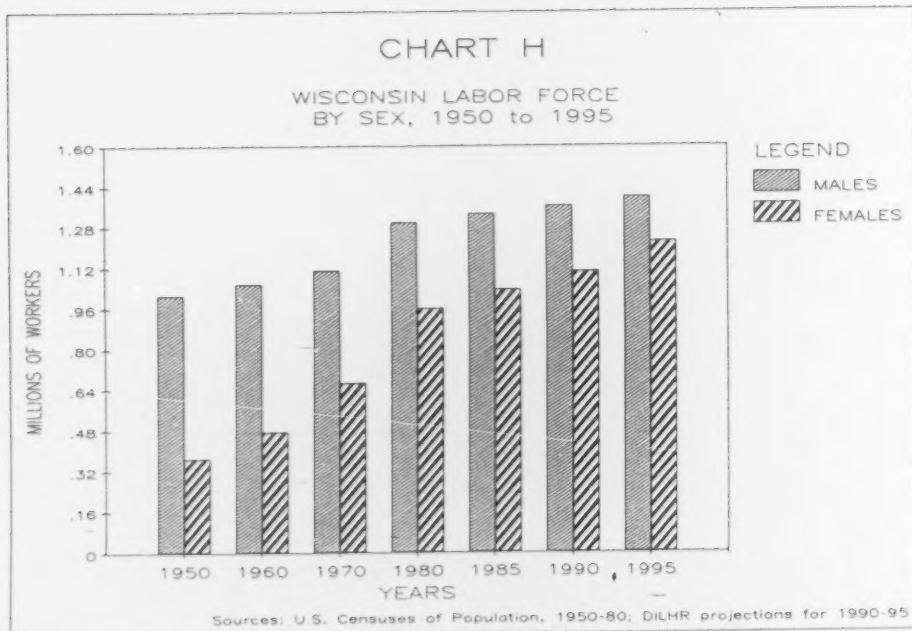
Age Categories	Civilian Labor Force Estimates:					Change in Labor Force Estimates: Compound Annual Rate of Change:							
	1970	1980	1985	1990	1995	1970-80	1980-85	1985-90	1990-95	1970-80	1980-85	1985-90	1990-95
TOTAL	1,774,008	2,261,018	2,367,253	2,468,938	2,620,716	487,010	106,235	101,685	151,777	2.455	0.923	0.845	1.200
MALE	1,108,584	1,299,091	1,334,044	1,364,387	1,398,423	190,507	34,953	30,343	34,036	1.598	0.532	0.451	0.494
16-19	88,395	109,378	88,820	77,100	79,388	20,983	(20,558)	(11,721)	2,288	2.153	-4.078	-2.791	0.587
20-24	121,948	188,590	188,502	158,674	141,128	66,642	(88)	(29,828)	(17,546)	4.456	-0.009	-3.387	-2.316
25-35	237,453	356,039	390,248	408,013	377,478	118,586	34,209	17,765	(30,535)	4.134	1.851	0.894	-1.544
35-44	224,841	238,927	287,068	345,404	387,786	14,086	48,141	58,336	42,382	0.610	3.739	3.769	2.342
45-54	219,116	208,203	197,181	216,227	265,965	(10,913)	(11,022)	19,046	49,738	-0.510	-1.082	1.861	4.228
55-64	164,706	156,363	144,470	126,010	117,385	(8,343)	(11,893)	(18,460)	(8,625)	-0.518	1.570	-2.697	-1.408
65 +	52,125	41,591	37,756	32,960	29,293	(10,534)	(3,835)	(4,795)	(3,667)	-2.232	-1.916	-2.680	-2.332
FEMALE	665,424	961,927	1,033,209	1,104,551	1,222,293	296,503	71,282	71,342	117,742	3.754	1.440	1.344	2.047
16-19	72,177	100,844	82,149	72,626	77,734	28,667	(18,695)	(9,523)	5,108	3.401	-4.017	-2.434	1.369
20-24	106,167	163,459	162,380	136,042	126,926	57,292	(1,079)	(26,338)	(9,116)	4.410	-1.323	-3.478	-1.378
25-34	112,685	250,451	294,943	327,386	335,013	137,766	44,492	32,443	7,628	8.314	3.324	2.109	0.462
35-44	120,577	173,177	215,166	267,159	330,187	52,600	41,989	51,993	63,028	3.687	4.438	4.424	4.327
45-54	131,940	145,448	150,901	178,910	229,697	13,508	5,453	28,009	50,787	0.979	0.739	3.464	5.125
55-64	93,605	102,767	101,229	95,930	96,673	9,162	(1,538)	(5,300)	744	0.938	-0.301	-1.070	0.155
65 +	28,273	25,781	26,441	26,498	26,061	(2,492)	660	57	(437)	-0.918	0.507	0.043	-3.320

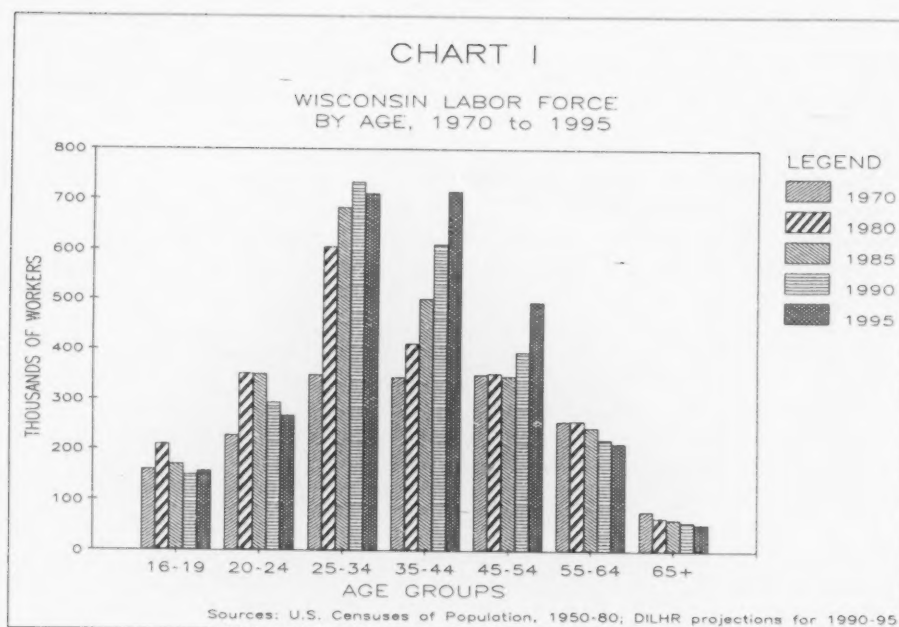
Source: DILHR: Bureau of Labor Market Information Projections for 1985-95 (10/86);
U.S. Census of Population for 1970 and 1980.

Our projections for 1990 assume that the improved economic conditions in the state will result in the level of net out migration from the state falling to about one-quarter of that occurring between 1980 and 1985. Moreover, we expect that the number of women in the labor force will continue to grow about three times faster than will the number of men. In fact, we expect that women seeking work in the state's labor market will account for about 70 percent of this increase in the labor force.

Our projections for the period from 1990 to 1995 assume that the rate of labor force growth in the state will increase to about 1.2 percent per year. These projections assume that relative economic conditions in the state will improve to the point that no net out migration from the state will occur during the period. We expect that the number of women in the labor force will grow about four times faster than the number of men. As a consequence, by 1995 women will account for about eighty percent of the growth in the labor force and for about 47 percent of the state's total labor force. (See Chart H.)

As we move toward 1990, the median age of the state's work force will rise. While the number of workers aged 55 or more will drop, the number aged 16 to 24 will fall even more and the number aged 35 to 54 will continue to rise sharply. By 1995, about 46 percent of Wisconsin's workers will be between 35 and 54, up from 36 percent in 1985. Moreover, by 1995, 16 percent of those seeking work in the state will be between 16 and 24, down from 22 percent in 1985. (See Chart I.)





Labor force projections, as we have noted above, depend on economic conditions in the state as well as the characteristics, preferences, and behavior of individuals seeking working. Due to the uncertainty of all these factors, our projections of the size and composition of the labor force are, at best, only an estimate of the future labor force in the state. In 1990, for example, we expect the a total labor force in the state of about 2,468,900. Reasonable changes in the underlying assumptions about labor force participation rates and net migration indicate that the actual size of Wisconsin's labor force will lie between 2,444,700 and 2,494,800 by 1990. Similarly, while the 1995 labor force is expected to total about 2,620,700, it will most likely lie between 2,573,800 and 2,672,100 by 1995.

To reach the estimated projections, the state's labor force will have to grow by between 15,500 and 25,500 workers per year between 1985 and 1990 and by between 20,000 and 35,000 workers per year between 1990 and 1995. As noted above, the underlying rates of job creation would be much smaller than those experienced over the ten years between 1970 and 1980 when the state's labor force absorbed an average of 48,700 new entrants each year. Instead, the rate of growth in the labor force will most likely resemble that of the eighties and the sixties when 20,000 to 30,000 new workers entered the labor market each year, though the mix of new entrants will contain many more women than men.

1.D. EMPLOYMENT AND UNEMPLOYMENT ESTIMATES

Not all people who enter the labor force seeking work find it. Both the size of the labor force and the number of people who are unemployed depend upon prevailing economic conditions both in the state and in other parts of the country. In reviewing estimates of the labor force, one of the issues participants in the projections process addressed concerned the expected levels of employment and unemployment in the state. Two cases emerged, depending on expectations about changes in the labor force participation rates of men and women.

On the one hand, if the proportion of women in Wisconsin's labor force continues to grow at the same rate as it has over the past twenty-five years and the proportion of men in the labor force continues to decline at its current rate, the labor force would grow more rapidly than expected, and the number of unemployed workers in the state could be expected to remain at about the same level as in 1987. We estimate that under these conditions, the ranks of the unemployed would number about 160,200 with an expected average unemployment rate of 6.4 percent per year by 1990. Moreover, if these changes in behavior persisted, the number of people seeking work in Wisconsin in 1995 who would be unable to find it would rise to 206,000, resulting in an expected average unemployment rate of 8.0 percent.

On the other hand, if the increase in labor force participation by women and the decrease in participation by men slow down, the labor force would grow more slowly than expected. The number of unemployed workers in the state could be expected to fall by about 50,000 to 110,100. This would result in an expected average unemployment rate of 4.5 percent per year by 1990. Moreover, these changes would result in the number of unemployed continuing to fall to 107,700 with a resulting expected average unemployment rate of 4.2 percent per year by 1995.

CHAPTER 2

Economic Trends and Industry Employment Projections

The number and mix of jobs available in particular industries in Wisconsin depends in large part on the demand of households, government, and businesses for goods and services produced by those industries. Roughly, the greater the demand for those goods and services both inside and outside the state, the larger the number of workers needed to produce them. Productivity gains due to the introduction of new technology or management practices and competition by firms outside the state will, however, alter the extent to which changes in demand will translate into more or fewer new jobs in the labor market. Changes in the level of employment in these industries in turn affect the number of workers employed in each occupation.

Changes in demand occur as the economy expands to meet the needs of an increasing population and as consumer tastes change over time. Additional shifts in demand occur with changes in the relative costs of goods and services. These changes are due to the adoption of new technologies for communications, production, and delivery and to the adoption of governmental regulations. Finally, the fiscal policies of the Federal Government, the monetary policies of the Federal Reserve Board, import competition, and the costs of other factors of production such as raw materials, capital, and energy affect employment levels in the state's economy as a whole and in specific industrial sectors.

This chapter presents the most recent industrial projections developed for Wisconsin by the Bureau of Labor Market Information. These projections were developed by extrapolating existing trends in industrial employment in the state into the future. A panel of analysts and economists familiar with the state's economy reviewed the initial round of projections and suggested alternative scenarios which might modify the overall and industry specific projections of nonfarm wage and salary employment in Wisconsin between 1985 and 1995. Research analysts in the Bureau then developed the three alternative projections presented here.

The chapter is divided into four sections: Section A describes the overall trends in nonfarm wage and salary employment for the state as a whole and for major industrial sectors; Section B discusses the range of factors considered by the Bureau's panel of analysts and economists in reviewing the initial industrial projections; Section C presents industry-specific projections for Wisconsin to 1995 based on the material presented in the previous two sections.

2.A. INDUSTRY EMPLOYMENT TRENDS IN WISCONSIN

Total employment in Wisconsin is expected to increase by 235,000 jobs in the nonfarm wage and salary portion of the labor force between 1985 and 1995. Employment in this portion of the labor force averaged 1,976,800 in 1985 and is expected to grow to 2,094,900 by 1990 and to 2,212,200 by 1995. Job growth at this level would constitute a nearly 12 percent increase over the decade or an increase of about 1.1 percent in the number of jobs in the nonfarm wage and salary sector each year. This projected rate of job growth for the decade is two to three times faster than that experienced between 1980 and 1985, but would be only half the rate at which jobs have been added to the state's economy between 1960 and 1985.

Job growth in the state's economy varies greatly with the business cycle. The state's economy is currently in the expansionary phase of the most recent business cycle. By the end of 1986, nonfarm wage and salary employment had advanced by 150,100 jobs since the low point of the

TABLE 5

CHANGE IN EMPLOYMENT IN WISCONSIN BY INDUSTRY

	Projected Percentage Change in Employment
Total Nonfarm Wage and Salary Employment	-11.9%
Manufacturing	5.8%
Durable Goods	7.6%
24 Lumber and Wood Products	-0.4%
25 Furniture and Fixtures	-3.1%
32 Stone, Clay, and Glass Products	2.6%
33 Primary Metal Industries	-3.1%
34 Fabricated Metal Products	10.3%
35 Nonelectrical Machinery	12.2%
36 Electrical Machinery	9.4%
37 Transportation Equipment	2.4%
38 Professional, Scientific, & Control Instruments	16.7%
39 Miscellaneous Manufacturing Industries	-0.1%
Nondurable Goods	2.9%
20 Food and Kindred Products	-1.6%
22 Textile Mill Products	-21.4%
23 Apparel and Other Finished Products	-9.5%
26 Paper and Allied Products	0.0%
27 Printing, Publishing, and Allied Products	16.5%
28 Chemicals and Allied Products	0.1%
30 Rubber and Miscellaneous Plastics Products	13.7%
31 Leather and Leather Products	-20.5%
Other Nondurable Goods	33.3%
10-14 Mining	-9.1%
15-17 Construction	9.1%
40-49 Transportation, Communication, & Public Utilities	6.3%
50-59 Wholesale and Retail Trade	14.4%
60-69 Finance, Insurance, and Real Estate	14.5%
70-89 Service and miscellaneous	21.3%
90-93 Government	7.4%

Source: DILHR: Bureau of Labor Market Information Projections (10/86)

last recession in 1983, or an overall increase of 8.0 percent from the annual average employment in 1983 to 1986. The annual rate of job growth over this period averaged 2.6 percent. The pace of growth in Wisconsin's nonfarm wage and salary employment actually increased in 1986, with the addition of 31,800 new jobs since 1985. Similar gains in 1985 added 27,600 new jobs over the 1984 level. Gains in both years were concentrated in the service providing sector.

All of the major industrial groupings have added new jobs during the current expansion. **Finance, Insurance and Real Estate, Service, Trade, and Construction** have experienced the most rapid gains, adding new jobs at an average annual rate of about 3.0 to 4.0 percent per year. Expansion in the **Trade and Service** categories each accounted for about 3 out of every 10 new jobs in Wisconsin between 1983 and 1986. Expansion in **Manufacturing** employment has accounted for about 1 out of every 5 new jobs during this current economic recovery.

The Bureau of Labor Market Information expects nonfarm wage and salary employment to continue to grow in all major industry groupings in the state's economy. In 1985, about one-third of all jobs were in the goods producing sector of the economy and two-thirds were in the service providing sector. By 1995, employment in the goods producing sector of the state's economy will drop to one-quarter of total employment. Nearly three out of every four workers in the state will be employed in some facet of the service sector.

Rates of growth in all major industrial groups are expected to remain the same or fall slightly over the next ten years. **Manufacturing** is expected to continue adding new workers through the mid-1990's, but at a much slower rate than any of the service sector groups except **Transportation, Communications, and Public Utilities**. Most new jobs will continue to come from expansion in **Trade and Services**.

The panel of analysts who have helped to shape our industrial projections have grown more and more conservative with their growth forecasts as they have made successive projections for nonfarm wage and salary employment in the Wisconsin in 1980, 1984, and 1985 for 1995. Overall, current forecasts for 1995 by the Bureau of Labor Market Information are about 21 percent lower than the previous forecasts published in 1985.

As Table 6 indicates, our forecasters have lowered their expectations for employment growth in every major industrial grouping in the state as we get closer to 1995. Anticipated employment growth has decreased across all industrial groupings. Most of the revisions indicated that expected employment levels would be about 15 to 20 percent slower than previously anticipated. The largest change in the current projections for 1995 over the previous ones is a revision in the amount of job growth expected in **Mining**. Reduced activities due to market conditions have resulted in our current projections indicating an expected loss of 9.1 percent of mining employment instead of our previously anticipated gain of 11.1 percent. Projections for nonfarm wage and salary employment in construction and finance, insurance, and real estate have also been revised downward to a greater than average extent. Employment growth in both of these major industry groups are expected to be 40 to 50 percent lower than the Bureau's previous estimates.

TABLE 6

HISTORICAL COMPARISON OF INDUSTRY PROJECTIONS FOR WISCONSIN

Industry Group	Percentage Change Projected for 1984-95	Percentage Change Projected for 1985-95	Percentage Change in Forecasts
Total Nonfarm Wage and Salary Employment	15.1%	11.9%	-21%
Mining	11.1%	-9.1%	-182%
Construction	15.1%	9.1%	-40%
Manufacturing	7.3%	5.8%	-21%
Transportation, Communication, & Public Utilities	7.4%	6.3%	-15%
Wholesale & Retail Trade	16.8%	14.4%	-14%
Finance, Insurance, & Real Estate	27.1%	14.5%	-46%
Services & miscellaneous	26.5%	21.3%	-20%
Government	9.0%	7.4%	-18%

Source: DILHR: Bureau of Labor Market Information (10/86)

Mining Employment

Mining employment currently provides about 2,000 jobs in Wisconsin. Employment in 1986 was up by about 100 over annual average levels of employment in 1985. Although employment in mining is growing slowly during the current expansionary phase of the business cycle, the level of employment is still several hundred jobs short of the pre-recessionary peak of 2,600 in 1979.

Sand and gravel quarrying remains the dominant type of activity in Wisconsin's mining industry. Employment in this portion of the mining industry depends primarily on the level of construction activity in the state. Metal mining is not occurring in the state despite years of preparation. World prices for metals will determine activity in potentially extractable metals located in the state.

Construction Employment

Annual average employment in construction in Wisconsin had risen in 1986 to 63,800 or about 3 percent of the state's nonfarm wage and salary employment. This is an increase of about 6.1 percent over the low of 56,900 experienced in 1982. This represents a rather sluggish recovery during a period of vigorous expansion in most other major parts of the state's economy.

Lower interest rates and tax incentives have spurred construction activities of all types during 1986. Changes in the Federal tax code have restricted previous incentives to build new office space. In additions, the one-time gain from lower interest rates is largely over.

Construction activity and employment levels will face more obstacles in future years, as supply continues to run ahead of demand due to overbuilding in office, retail and multi-family housing units.

While most of the analysts see construction employment levels rising, long-term future gains at a rate faster than expected population increases are not likely.

Manufacturing Employment

Jobs in manufacturing account for one-fourth of Wisconsin's nonfarm wage and salary employment. The manufacturing sector of Wisconsin's employment was hard hit by the economic recessions of the early 1980's. Nonfarm wage and salary employment in manufacturing bottomed out in 1983 with an annual average of 484,100 jobs, down about 107,200 jobs from 1979's peak year of 591,300. Manufacturing employment levels reached 513,900 in 1985. Current estimates for 1986 place annual average employment in manufacturing in the state slightly lower at 512,500.

In the first two years of the recovery, in the nation as a whole, output and employment levels both rose sharply, while in the last two years output has edged up only slightly. Manufacturing employment levels have dropped significantly nationwide during this period, indicating substantial gains in productivity.

This sharp gain in productivity, with little gain in output, has resulted from a painful process of cost cutting. While some industries have improved their financial health by this process, some continue to have substantial losses and are forced to reduce employment levels by any means possible. This is particularly true for the durable goods industries.

Major industries in Wisconsin which have been affected by this problem have been limited to makers of farm, construction and mining machinery, automobiles and automobile parts, and other manufacturers of fabricated metal products, nonelectrical machinery, and transportation equipment. Together, these industries employed 184,200 thousand workers in 1985 or a little over one-third of all manufacturing employment in the state. These three industries have not participated in the recent economic recovery to the same extent as most other industries in the manufacturing sector. Employers in these industries will remain under competitive pressure to cut more workers from their employment rolls and to affect other possible means of cutting costs to remain in business.

Another third of Wisconsin's manufacturing employment is concentrated in four major industry groups: food processing and kindred products, paper and allied products, printing and publishing, and rubber and miscellaneous plastics. Non of these industries have been subject to extensive foreign or outstate domestic competition and all are reasonably healthy financially. Unfortunately, there has been limited employment growth overall in these industries. Productivity gains in these industries have resulted more from increased efficiencies of production than from growth in volume of output. Employment in these industries has increased for some of the firms and has increased slightly overall.

Industry leaders and observers are in general agreement that the conditions of the latest two years, rather than those of the recovery period, are likely to continue into the foreseeable future. Thus, any significant job growth in Wisconsin over the next few years is not likely to come from employment growth in the manufacturing sector as a whole.

Transportation, Communication and Public Utilities Employment

With 92,900 jobs in 1986 this industry grouping constitutes about 5 percent of the state's nonfarm wage and salary employment. Although employment in this grouping increased by 5.0 percent in 1985 and 2.0 percent in 1984, In 1986, it declined by 1.4 percent or 1,300 jobs. Net overall growth in new jobs since 1979, the last pre-recession year, has accounted for about a 5.4 percent increase in employment in this industry group.

Most recently, declines occurred in the communications industry, which is feeling the effects of deregulation, and in motor transportation. Utilities increased employment by 1.3 percent, about 200 workers in 1986. While the rising demand for telecommunication services continues, so do extensive productivity improvements, which reduces employment gains as well as costs. Continued cost reductions, in turn, maintain growth in demand for additional or new types of service, which results in additional workload and employment needs.

Transportation service activity is predominantly motor freight transportation service in Wisconsin. Activity in motor freight reflects the pace of general economic activity as well as motor freight's competitiveness with other transportation alternatives (air, rail, water). Deregulation has improved efficiencies for all types of transportation. This directly limits employment growth, but indirectly aids industry's overall efficiency, which in turn helps maintain or gain additional work. Thus, future employment gains in this industry stem from our state's and nation's general competitiveness in the long run.

Public utilities continue to be a capital intensive industry. Employment levels in this industry continue to be affected mostly by our general level of economic activity and population growth. Public utilities have become an export industry. While only on a minor scale thus far, Wisconsin is now selling electricity to Illinois users. This trend is expected to increase over time.

Trade (Retail and Wholesale) Employment

Nearly one-fourth of Wisconsin's nonfarm wage and salary employment falls in retail and wholesale trade. About 100,000 of these jobs or just over 20 percent are in wholesale trade, the remaining 377,400 in retail trade. Wisconsin's trade industries group continued the steady growth experienced in recent years into 1986, although several major subgroups provided no employment growth. Employment in trade in 1986 was up by 10.3 percent or 40,100 jobs since the recession low in 1983. Most recently, growth in Wisconsin's trade employment level occurred at about 75 percent of the national rate of increase.

Between 1985 and 1986, the higher paying wholesale trade portion and the general merchandise group experienced a very slight gain and no gain, while most of the recent employment gain continued to occur in eating and drinking establishments. The automobile dealers and service stations group and the miscellaneous retailing group also added significant numbers of new jobs.

Sluggish employment growth in both retail and wholesale trade in the state has renewed the concern of some analysts that employment growth may be topping out in this large employment category. Growth in this industry has exceeded population growth for a number of years. Together with the concern that consumers are over-extended financially, the possibility exists that trade will find it increasingly difficult to continue its long upward trend.

Finance, Insurance and Real Estate Employment

Employment in the financial industries constitutes about 5 percent of the state's nonfarm wage and salary employment jobs. Riding the crest of the current "great bull market," state and national employment levels in this category have risen at a faster rate than nonfarm payroll employment overall. Employment in the broad financial industries has risen by about 9.3 percent with the addition of 44,500 new jobs since 1983. For 1986, Wisconsin's employment growth has been rapid at 3.9 percent. Rapid as it may be, Wisconsin's growth rate has been only about 70 percent of the 6 percent rate experienced by the country as a whole.

Demographic impacts have been responsible for much of the increased demand for finance and insurance services. As the "baby boom" has reached adulthood they have sought their own residences, bank accounts and insurance policies. Increased workload from these activities has resulted in significant gains in employment in this industry grouping. Most forecasters think the demand for more services will continue, but a minority of analysts caution against extending the rapid growth experienced in this group at the same pace, suggesting a slowdown is possible.

These analysts suggest limits to growth will occur from such diverse forces as the increased use of electronic transfer of funds, the growth of interstate banking, the aging of the baby boom beyond the normal age of first time home buyers, slow growth in "real" personal income, the aging of the bull market. These analysts argue that future growth in this group must be discounted to some extent by the rapid growth that has already occurred.

Service and Miscellaneous Employment

Major job growth in the state over the next several years will continue to be concentrated in the service providing portion of the economy. A major component the broad service sector are providers of a wide array of services to individuals, businesses, and government. This portion of the service sector includes employment in lodging places, personal, and amusement and entertainment services as well as legal, educational, health, and engineering services. Taken together, employment in these services accounts for about one-fifth of the state's total nonfarm wage and salary employment.

During the 1980s, gains in the level of service and miscellaneous employment continued at the pace they have averaged in the first half of the decade. This gain was about 75 percent that of the national rate of increase. All or nearly all analysts forecast continued growth in service and miscellaneous industry employment levels. Continued growth in this part of the economy will depend on factors such as population growth, our ability to provide services for outstate users, growth in personal income levels and increases in our general standard of living.

Proportionately, Wisconsin has slightly fewer jobs, about 7.5 percent less in the services industries relative to our population than the national average. While a number of factors account for this slightly lower than expected employment, location is the most likely explanation. The larger metropolitan centers, Chicago and Minneapolis-St. Paul, lie just outside our borders. Larger firms in these cities provide some of the services that otherwise would be provided by in-state firms.

The two largest service sub-groups, medical services, with 155,000 jobs, and business services with 70,000 jobs, reveal different shares and short-term changes. Over the year, business services employment gained at the national rate, but Wisconsin has only 70 percent of its

proportionate share of national employment. In contrast, medical services employment levels increased at only two-thirds the U.S. pace in 1986, while it employs 16 percent more than its proportionate share of workers.

Government Employment

Government employment continues to be the fourth largest industry employment group in Wisconsin with 325,200 employees or 16 percent of the state's nonfarm wage and salary employment. Growth in government employment has averaged 0.7 percent a year since 1979. During the most recent expansionary period, government employment has grown slower than any other major sector of the economy, up only 4.1 percent between 1983 and 1986 or about half the rate of increase in the economy as a whole. Most recently, government employment in the state was up by about 4,600 between 1986 and 1985.

While employment gains will continue to be limited by budgetary constraints, modest increases in the primary school-age population will result in increased employment in the education portion of local government during the next decade.

2.B. DIVERGENT VIEWS OF THE FUTURE WORLD OF WORK

In forecasting changes in the size and composition of the industrial work force of the state, analysts must make assumptions about the future demand for goods and services and about changes in the technology of production that will affect the demand for labor. A number of factors influence future demand and labor requirements. These include the impact changes in the distribution of income and vocational preparation across the society, demographic shifts, and technological and managerial advances as well as fiscal and monetary policies and conditions.

The panel of economists and analysts who gathered at DILHR in 1986 to assess the future of the world of work in Wisconsin held divergent views about the importance given to various factors affecting the state's economy. The group had been asked to frame their responses around four questions. These included

1. How will automation affect the Wisconsin labor force?
2. How will the increased number of low-paying jobs affect the Wisconsin consumer's ability to purchase increasingly expensive durable goods?
3. Will the decreasing number of new entrants into the labor force affect our ability to provide services?
4. Will increased automation create a permanent class of unemployed because some people will be unable to master skills necessary to obtain changing jobs?

The responses we received cover not only these questions, but some other broadly related issues. The material which follows tries to capture the highlights of the panel's discussion and to retain the diversity of its members' views under the five broad headings of **Impacts of Changes in Technology, Impacts of Changes in the Income Distribution of Jobs, Impacts of Changes in the Labor Force, Impacts of Economic Restructuring, and General Economic Conditions.**

Impacts of Changes in Technology

- ** Automation continues to yield productivity gains in manufacturing. This will permit the continued expansion of manufacturing output with no increases in employment. Some manufacturers are aiming for zero direct costs in labor through increased investments in processing equipment.
- ** There will be increased capital spending in the service area, to bring about an "industrialization of services" and a marked increase in performance.
- ** While many manufacturers are trying to reduce labor costs, industries which fail to automate may lose the most employment, because they will go out of business because they will be unable to compete using their existing outdated technology.
- ** Automation has created some of the fastest growing areas of employment in Wisconsin--manufacturing of computing and accounting machinery, photographic services, data processing services and miscellaneous business services.
- ** The changes that have occurred in information occupations as a result of improvements in telecommunications and other technology may be even more revolutionary than the development of robots and other forms of automation in manufacturing.

- ** Most severely affected by automation or robotization are the workers engaged in production activities, such as welding, painting and operating machine tools. The growth rate of robot application can range from 35 to 42 percent annually, according to some industry sources. Robots affect the Wisconsin labor force, because they are heavily used in the industries in which Wisconsin has major employment--durable goods manufacturing, specifically primary metals, machinery except electrical, electrical or electronic equipment, transportation and scientific instruments.
- ** Automation has also moved into services in automatic tellers and electronic checkout, which price, inventory and order materials.
- ** Alternatively, some analysts indicated that occupations which are severely affected by automation are those in production activities--welding, painting and operating machine tools. Nevertheless, the greatest changes have taken place in information-related occupations as a result of telecommunications. Clerical tasks in filing and billing have increased efficiency, but rapidly expanding demand for workers has led to greater employment growth.
- ** Foreign competition and CAD-CAM will reduce our manufacturing labor force.

Impacts of Changes in the Income Distribution of Jobs

- ** Some analysts indicated that the middle income jobs in manufacturing are falling the fastest according to some studies.
- ** Others felt that occupational changes in income have been mixed overall. Much of the growth in low wage jobs has absorbed workers seeking part-time work, resulting in higher or stable household incomes in two wage earner households.
- ** Radical changes in patterns of household consumption, family structure, and labor force participation are resulting in a more highly polarized society with growing numbers of well-to-do two earner households and poverty-struck single-headed households.
- ** From 1969-1983, "other" services were the fastest growing sector and had the lowest mean income, but the fastest growing segments within this sector were the highest paying jobs.
- ** Females, youth, elderly and minority workers have been absorbed by service industries, because of the flexibility of schedules service jobs provide. Many service workers are part-time by choice, and wages reflect the ease of exit and entry service workers are accorded.

Impacts of Changes in the Labor Force

- ** Some analysts thought that because the bulk of the baby boom is beyond the age of first home buying, demand for housing has peaked. Construction employment will also lag because we will have less need for highway construction; moreover, nonresidential structures have been overbuilt.
- ** Alternatively, others on the panel felt that due to deferred spending by consumers and government, there is a pent up demand for housing and a need for road repair projects.

- ** Some analysts noted that the baby bust is upon us. The declines in the number of 16-19 year olds and consequent decline in the number of young workers is demonstrated by an increasing number of "want ads" for entry level jobs.
- ** Manufacturing and service providers will have to change their organizational composition to account for the shrinking supply of young workers, alter their production processes, offer wage incentives to hire teenagers from labor surplus areas such as suburbs, or figure out how to expand career opportunities for their workers.

Impacts of Industrial Restructuring

- ** An "industrialization" of services is coming about through increased capital spending, and the "application of purposeful management" is bringing a marked increase in productivity. This will show in the deceleration of labor costs and the prices of services, which in turn will stimulate demand and lead to eventual higher wages for those employed.
- ** Service industries have fostered tremendous occupational mobility through the establishment and growth of small businesses, flexible movement between firms, creation of new occupations and the growth of markets.
- ** Some workers dislocated from traditional manufacturing industries do not possess the skills necessary to gain employment in occupations where opportunities are available. Thus, it is essential that educational institutions continue to respond to this reality by identifying skills required by "new" employers, skills lacking to the unemployed, and allowing training in other areas.
- ** The downward employment trend in manufacturing of 1979-1984 will continue as a result of productivity gains. There is a transfer of manufacturing establishment jobs moving to the service industry through the process of "contracting out." This process is also called "dis-integration" in contrast to the vertical and horizontal integration of production processes common in much of the 19th and 20th centuries.
- ** Service sector growth cannot continue unchecked relative to population growth. There are limits to the proportion of household consumption which can support further growth in the number of restaurants and boutiques.

General Economic Conditions

- ** Some panel members felt that Wisconsin's economy will continue to recover and Wisconsin industrialists will be able to continue to compete on the national and global markets.
- ** Some thought that the construction industry has overbuilt. Our financial marketplaces in Wisconsin cannot compete against interstate financial holding companies. Trade will be weak because of declining personal income.
- ** Alternatively, others felt that the finance, insurance and real estate industries in the state will not lose out to interstate competition because Wisconsin's financial institutions are well positioned in the market.

2.C. INDUSTRY SPECIFIC EMPLOYMENT PROJECTIONS FOR WISCONSIN

This section presents detailed historical data and alternative projections of nonfarm wage and salary employment for specific industrial groupings for Wisconsin. In each case we provide three alternative estimates of future employment levels in an industry in 1990 and in 1995. The first estimate is a **high** one, calculated by averaging the three highest forecasts advanced by our panel of experts. The second estimate is an **average** one, calculated by averaging all of the forecasts developed by the panel. The third estimate is a **low** one, calculated by averaging the three lowest forecasts advanced by the panel.

The estimates are summarized in Table 7. The detailed historical data and graphic descriptions of employment change by industry follow.

TABLE 7

WISCONSIN INDUSTRIAL EMPLOYMENT PROJECTIONS
(IN THOUSANDS)

Employment by Standard Industrial Groups	Historical Experience:			Projections to 1990:			Projections to 1995:		
	1970	1980	1985	High	Average	Low	High	Average	Low
Nonfarm Wage & Salary Emp.	1,530.4	1,938.1	1,976.8	2,201.8	2,094.9	1,987.9	2,402.9	2,212.2	1,992.5
Manufacturing	500.9	558.0	514.8	569.5	531.1	485.5	609.8	544.5	466.2
Durable Goods	321.5	364.4	315.4	354.1	329.2	299.4	382.8	339.4	285.0
24 Lumber & Wood Products	15.6	20.7	22.6	23.3	22.1	19.5	24.4	22.5	19.4
25 Furniture & Fixtures	7.8	9.6	9.8	10.1	9.6	9.1	11.1	9.5	6.5
32 Stone, Clay, & Glass	8.1	9.1	7.8	8.5	8.0	7.1	9.3	8.0	6.0
33 Primary Metal Industries	30.1	26.1	19.3	20.7	19.2	17.6	22.0	18.7	15.3
34 Fabricated Metal Products	43.8	58.4	51.4	58.1	53.7	49.3	64.3	56.7	48.3
35 Nonelectrical Machinery	108.2	125.7	100.1	115.9	107.0	97.3	123.2	112.3	97.7
36 Electrical Machinery	48.6	56.8	50.1	55.9	52.7	48.9	61.5	54.8	48.5
37 Transportation Equipment	36.2	34.7	32.8	37.1	34.5	29.8	40.9	33.6	23.0
38 Prof., Sci., & Control Instr.	9.0	12.4	11.4	13.7	12.4	11.5	15.1	13.3	11.8
39 Misc. Manufacturing Industries	14.1	10.9	10.1	10.8	10.0	9.3	11.0	10.0	8.5
NONDURABLE GOODS MFG	179.4	193.6	199.4	215.4	201.9	187.1	227.0	205.1	181.2
20 Food & Kindred Products	57.6	64.9	62.5	63.7	62.0	59.1	65.7	61.5	56.4
22 Textile Mill Products	7.0	4.7	4.2	4.1	3.9	3.5	4.0	3.3	2.4
23 Apparel & Oth. Finished Products	6.8	6.5	6.3	6.3	6.0	5.7	6.2	5.7	5.0
26 Paper & Allied Products	45.0	47.8	48.1	50.8	47.2	42.0	53.0	48.1	41.3
27 Printing and Publishing	25.4	32.4	38.2	46.5	41.8	38.7	49.9	44.5	39.7
28 Chemical & Allied Products	11.3	9.7	10.0	10.6	10.0	9.5	11.1	10.1	8.8
30 Rubber & Misc. Plastics	12.1	17.6	22.6	25.8	23.9	22.3	29.4	25.7	22.2
31 Leather & Leathr Products	13.9	9.4	7.3	7.1	6.7	6.0	7.2	5.8	5.1
Other Nondurable Goods	0.4	0.4	0.3	0.5	0.4	0.3	0.5	0.4	0.3
10-14 Mining	2.6	2.6	2.2	2.4	2.0	1.8	2.6	2.0	1.5
15-17 Construction	62.0	70.1	62.8	69.3	66.4	62.8	74.8	68.5	59.0
40-49 Transport., Commun., Utilities	80.9	92.1	93.7	97.8	95.4	93.3	105.5	99.6	93.1
50-59 Wholesale & Retail Trade	327.4	436.8	462.5	509.6	497.0	483.4	560.3	529.3	493.9
60-67 Finance, Insur. & Real Estate	60.5	93.3	104.2	120.7	111.5	100.7	134.1	119.3	99.7
70-89 Service & Miscellaneous	230.7	364.2	415.2	482.9	459.2	442.1	538.8	503.5	469.1
90-93 Government	265.5	321.1	321.6	349.6	332.3	318.3	377.0	345.5	310.0

HIGH: Arithmetic mean of three highest forecasts

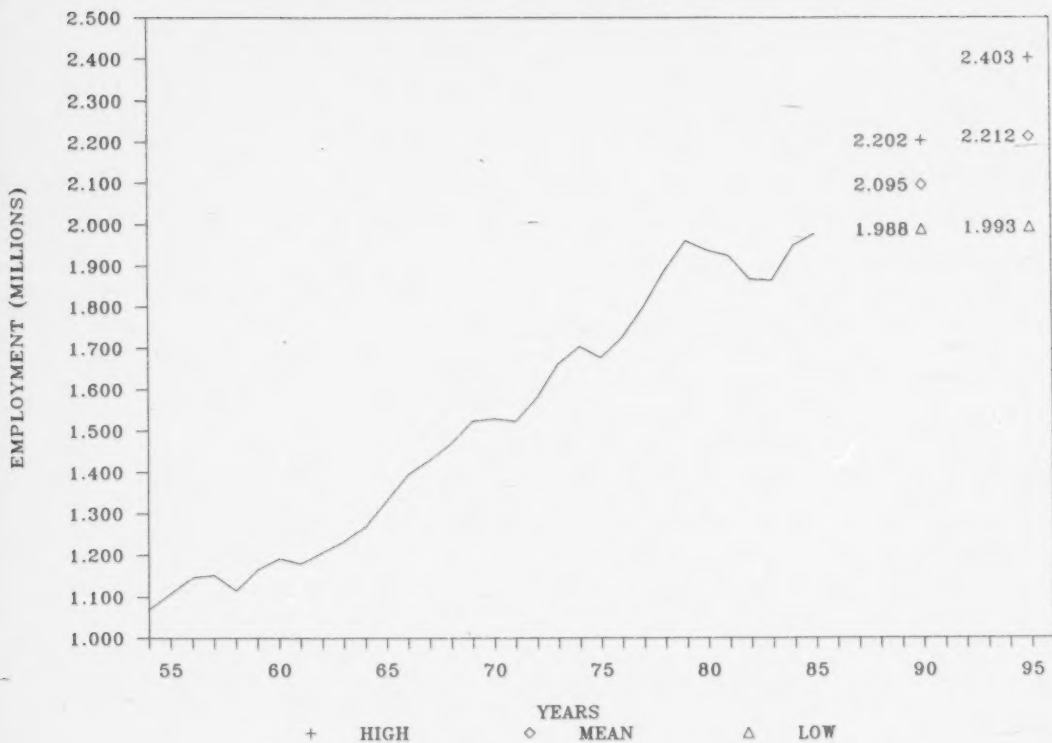
AVERAGE: Arithmetic mean of all forecasts

LOW: Arithmetic mean of three lowest forecasts

Notes: Data below industrial division level for 1970 based on 1967 Standard Industrial Classification.
Annual average data is based on 1985 benchmark. Totals may not add due to rounding.

Source: DILHR: Bureau of Labor Market Information Projections (10/86)

NONFARM WAGE AND SALARY EMPLOYMENT

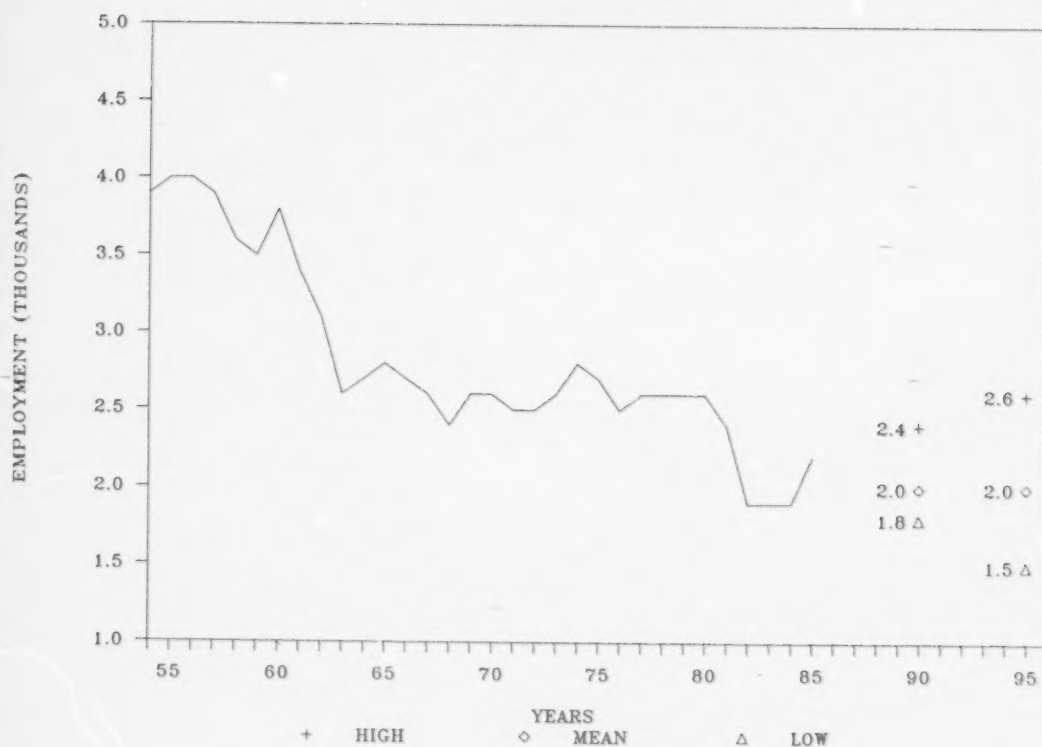


HISTORICAL EMPLOYMENT (in thousands)

1954	1069.6	1961	1179.9	1968	1472.1	1975	1676.8	1982	1866.8
1955	1108.1	1962	1207.2	1969	1525.1	1976	1725.9	1983	1864.6
1956	1146.9	1963	1233.5	1970	1530.4	1977	1798.9	1984	1949.2
1957	1152.0	1964	1270.9	1971	1525.4	1978	1887.0	1985	1976.8
1958	1114.9	1965	1331.7	1972	1580.8	1979	1960.2		
1959	1166.0	1966	1394.1	1973	1660.5	1980	1938.1		
1960	1191.9	1967	1430.5	1974	1703.4	1981	1923.2		

Nonfarm wage and salary employment peaked in 1979 and did not surpass that year's employment until 1985. From 1985 to 1995 nonfarm employment is expected to resume its growth, but not nearly at its pre-1979 ratio.

MINING EMPLOYMENT



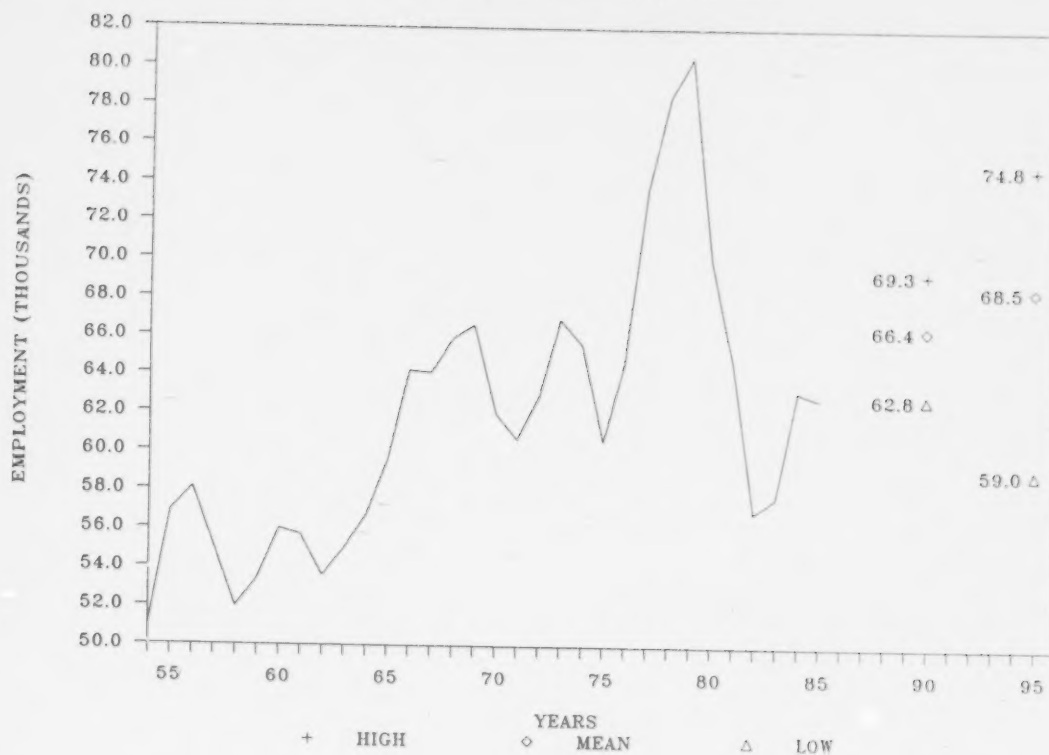
HISTORICAL EMPLOYMENT (in thousands)

1954	3.9	1961	3.4	1968	2.4	1975	2.7	1982	1.9
1955	4.0	1962	3.1	1969	2.6	1976	2.5	1983	1.9
1956	4.0	1963	2.6	1970	2.6	1977	2.6	1984	1.9
1957	3.9	1964	2.7	1971	2.5	1978	2.6	1985	2.2
1958	3.6	1965	2.8	1972	2.5	1979	2.6		
1959	3.5	1966	2.7	1973	2.6	1980	2.6		
1960	3.8	1967	2.6	1974	2.8	1981	2.4		

The mining industry in Wisconsin is made up, for the most part, of sand and gravel pits. This industry is expected to remain level through 1995.

1/Data based on 1985 benchmark.

CONSTRUCTION EMPLOYMENT

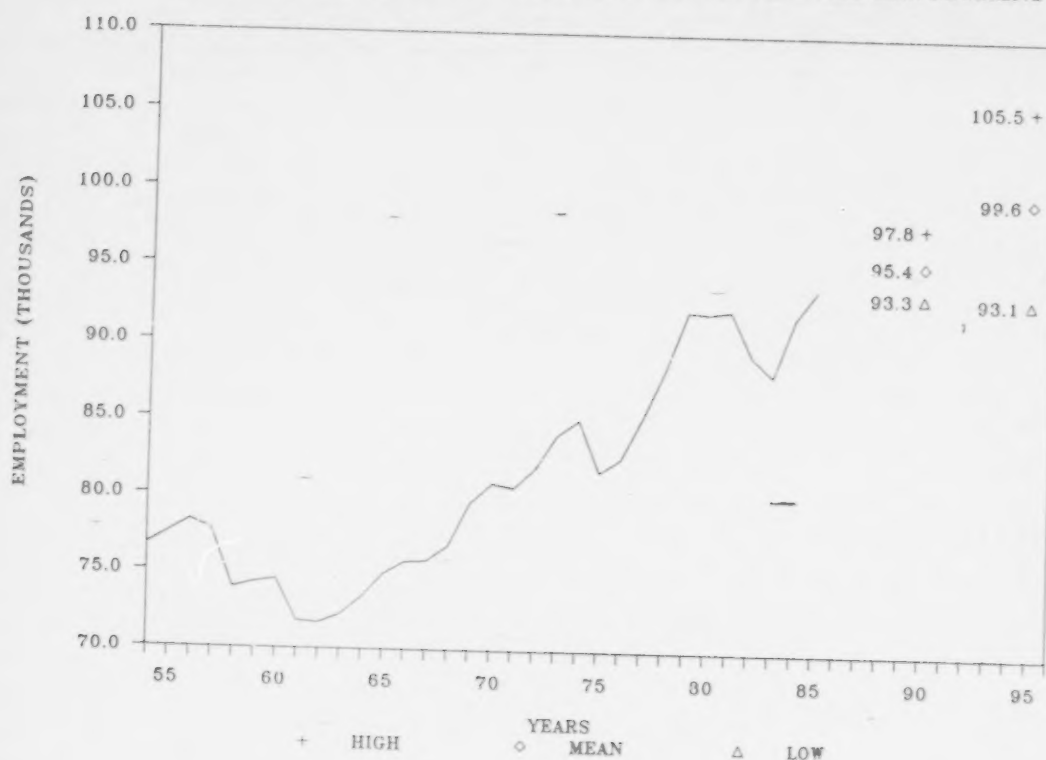


HISTORICAL EMPLOYMENT (in thousands)

1954	51.0	1961	55.7	1968	65.9	1975	60.6	1982	56.9
1955	56.9	1962	53.6	1969	66.6	1976	64.7	1983	57.7
1956	58.1	1963	55.0	1970	62.0	1977	73.7	1984	63.2
1957	55.1	1964	56.7	1971	60.7	1978	78.5	1985	62.8
1958	52.0	1965	59.6	1972	62.9	1979	80.5		
1959	53.4	1966	64.2	1973	66.9	1980	70.1		
1960	56.0	1967	64.1	1974	65.6	1981	64.8		

The low interest rates should cause increased construction employment in the short run, but increased efficiency will result in an increased reliance of the use of prebuilt modules, resulting in turn in less on-site employment. The employment projections vary to 1995 depending upon whether or not construction is in a boom or bust that year.

TRANSPORTATION, COMMUNICATIONS, AND PUBLIC UTILITIES EMPLOYMENT

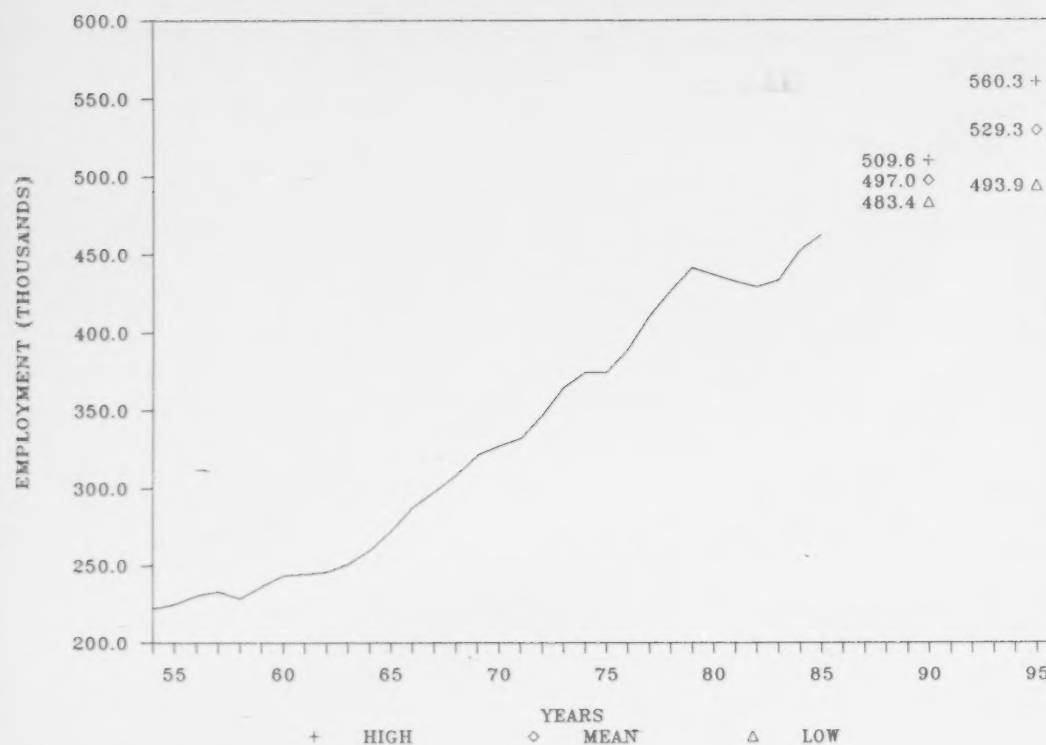


HISTORICAL EMPLOYMENT (in thousands)

1954	76.7	1961	71.8	1968	76.8	1975	81.7	1982	89.4
1955	77.5	1962	71.7	1969	79.6	1976	82.6	1983	88.1
1956	78.3	1963	72.2	1970	80.9	1977	85.4	1984	91.9
1957	77.7	1964	73.4	1971	80.6	1978	88.4	1985	93.7
1958	73.9	1965	74.9	1972	81.9	1979	92.2		
1959	74.3	1966	75.7	1973	84.1	1980	92.1		
1960	74.5	1967	75.8	1974	85.1	1981	92.3		

Originally, these industries were considered as a group because business activity in each of the segments was subject to similar governmental regulations for natural monopolies. Many of these regulations have been lifted over the last fifteen years. The airlines have grown with competition, but there have been losses and mergers in this transition. Trucking is expected to grow moderately, while telecommunications is expecting continued expansion through new products and processes to enhance communication based on laser and fiber optics.

TRADE (WHOLESALE AND RETAIL) EMPLOYMENT

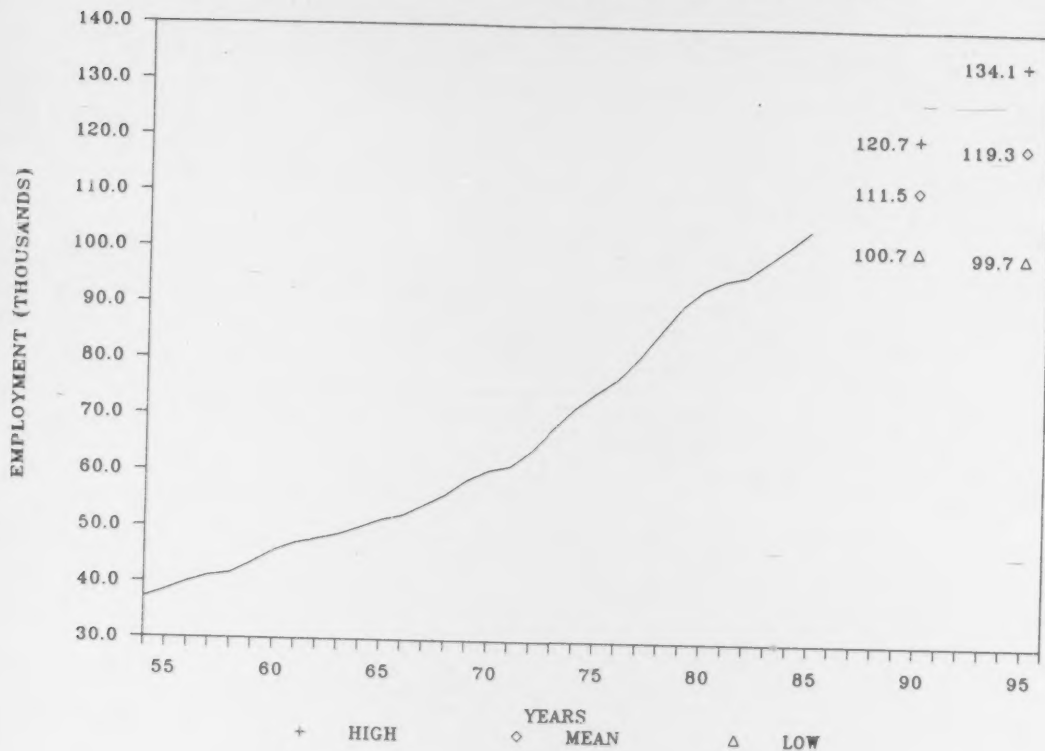


HISTORICAL EMPLOYMENT (in thousands)

1954	222.2	1961	244.7	1968	308.7	1975	374.7	1982	428.9
1955	225.1	1962	246.4	1969	321.6	1976	388.8	1983	433.3
1956	230.7	1963	251.3	1970	327.4	1977	410.2	1984	452.8
1957	233.3	1964	260.5	1971	332.1	1978	426.6	1985	462.5
1958	228.8	1965	273.0	1972	346.9	1979	441.2		
1959	236.7	1966	288.0	1973	364.4	1980	436.8		
1960	243.9	1967	298.0	1974	374.3	1981	432.4		

Computerization is making retail trade employees more efficient. Their numbers continue to increase as part-time workers, in many cases teenagers and secondary income workers, hold these positions. The passing of the baby boom into its thirties, with fewer children coming behind them, makes trade expansion selective in new directions.

FINANCE, INSURANCE, AND REAL ESTATE EMPLOYMENT

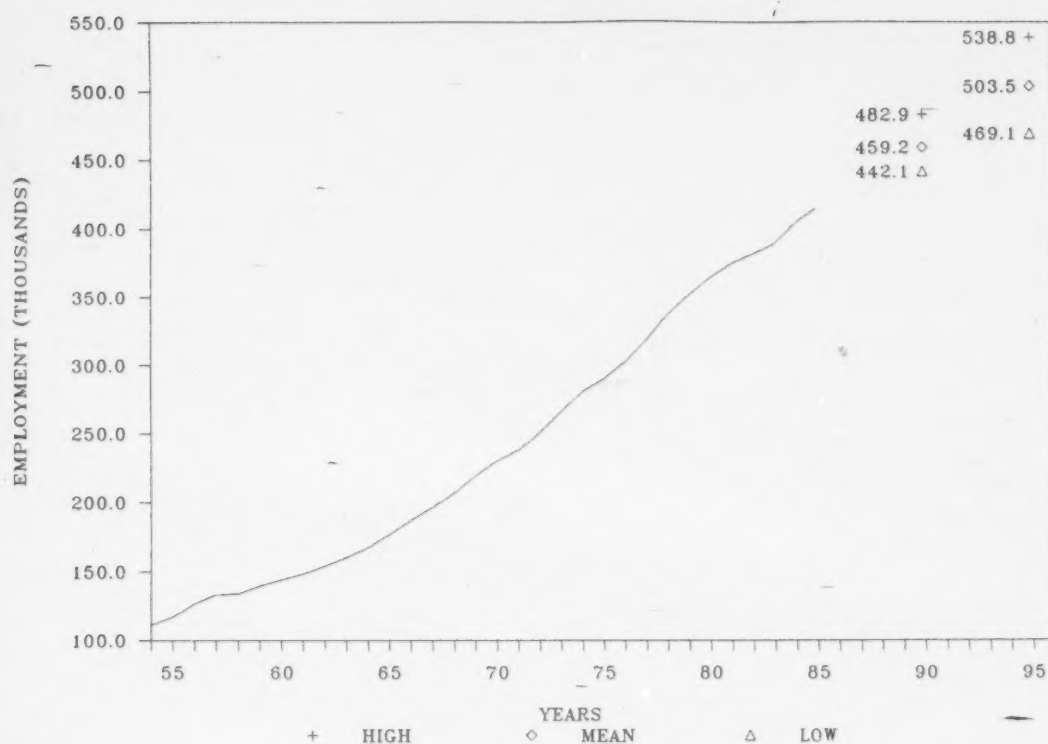


HISTORICAL EMPLOYMENT (in thousands)

1954	37.2	1961	47.1	1968	56.2	1975	74.5	1982	95.8
1955	38.5	1962	47.9	1969	58.8	1976	77.0	1983	98.6
1956	40.1	1963	48.8	1970	60.5	1977	81.0	1984	101.3
1957	41.2	1964	50.1	1971	61.4	1978	85.7	1985	104.2
1958	41.7	1965	51.5	1972	64.2	1979	90.3		
1959	43.6	1966	52.4	1973	68.2	1980	93.3		
1960	45.7	1967	54.3	1974	71.8	1981	95.0		

Brokerage, investment, and insurance firms are finding more innovative methods to deal with the increasing amount of consumers' disposable income. This has resulted in increased employment in these industries. The majority of the projectors, however, felt that this growth would slow to 1995, as computers increase the efficiency of operations.

SERVICES AND MISCELLANEOUS EMPLOYMENT

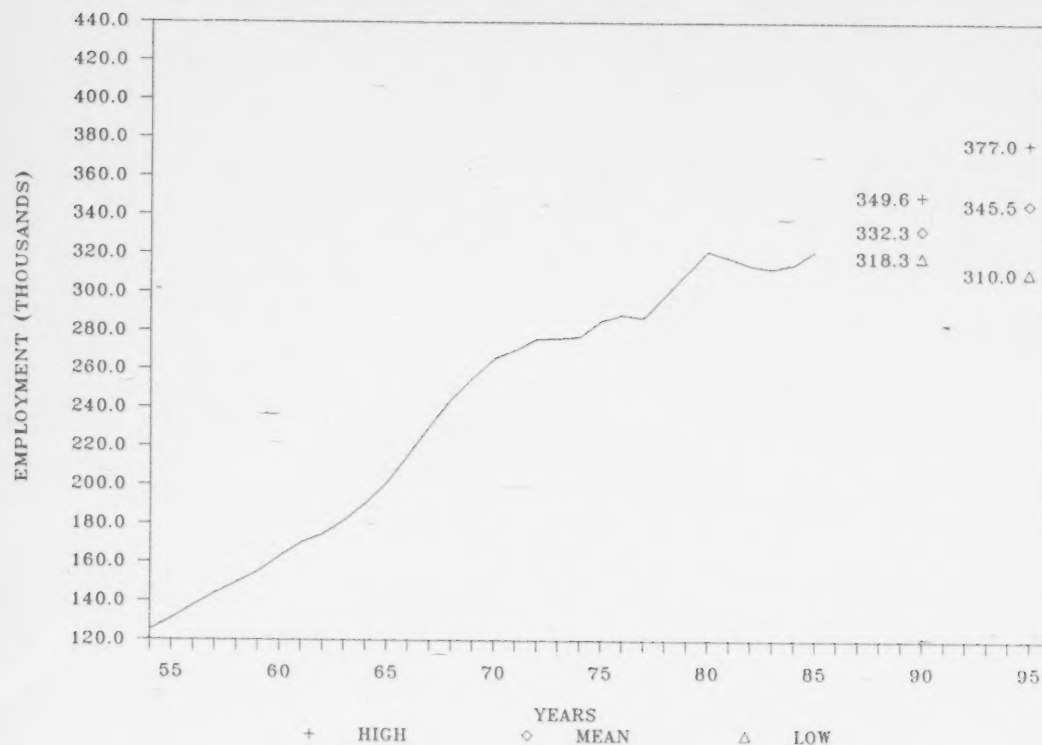


HISTORICAL EMPLOYMENT (in thousands)

1954	111.4	1961	148.0	1968	207.2	1975	290.2	1982	381.5
1955	117.1	1962	154.0	1969	219.7	1976	302.4	1983	388.6
1956	126.6	1963	160.5	1970	230.7	1977	319.0	1984	404.4
1957	133.2	1964	167.5	1971	238.3	1978	337.3	1985	415.2
1958	133.5	1965	177.1	1972	251.2	1979	351.9		
1959	139.8	1966	187.3	1973	266.3	1980	364.2		
1960	144.3	1967	196.7	1974	280.7	1981	374.9		

As more people become employed in the low paying portions of the service industries, some economists feel that we will not be able to support as much service industry employment. Members of our projections panel show growth continuing in this area, based on the assumption that the innovative methods devised by Wisconsin entrepreneurs for initiating new and different services will continue to 1995.

FEDERAL, STATE, AND LOCAL GOVERNMENT EMPLOYMENT

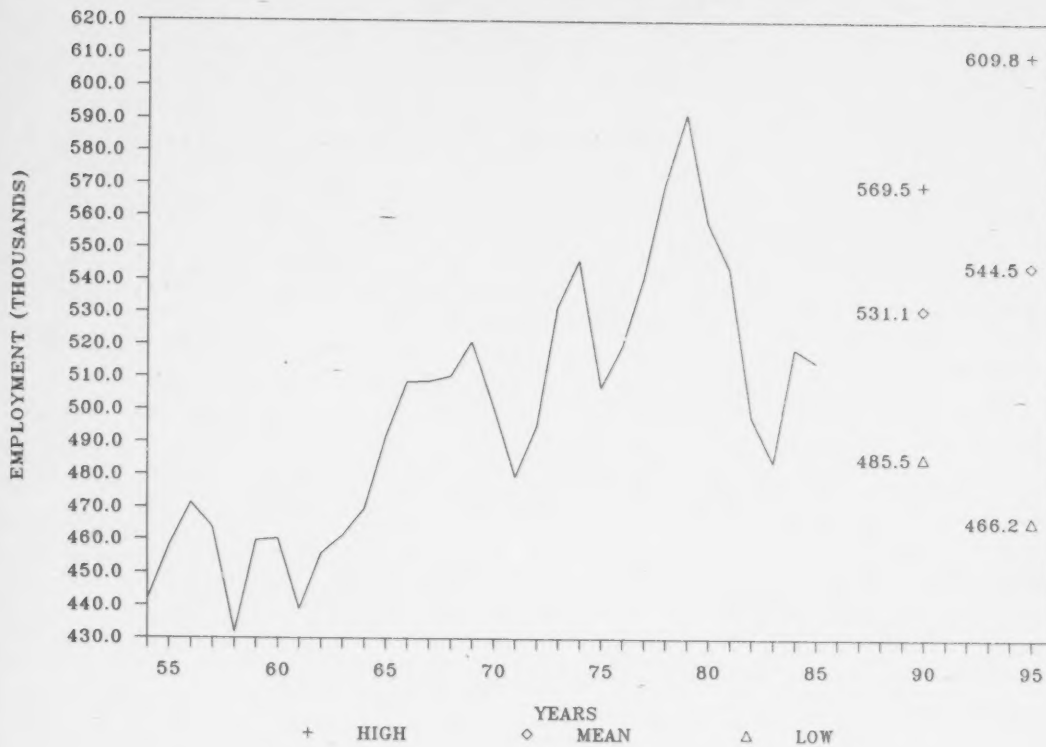


HISTORICAL EMPLOYMENT (in thousands)

1954	125.3	1961	170.4	1968	244.6	1975	285.4	1982	314.1
1955	131.0	1962	174.7	1969	255.3	1976	288.6	1983	312.4
1956	137.7	1963	181.7	1970	265.5	1977	287.1	1984	314.7
1957	143.9	1964	190.4	1971	270.2	1978	298.2	1985	321.6
1958	149.7	1965	201.0	1972	275.8	1979	310.1		
1959	155.0	1966	215.2	1973	276.3	1980	321.1		
1960	163.2	1967	230.3	1974	276.9	1981	318.0		

Government employment in the state has declined from 1980 to 1984, with 1985 moving up very slightly. During 1986, two sectors of government, federal and state, moved up slightly, while local government declined in employment. Our panel sees government services increasing to 1995, but at a slower rate than in the past.

MANUFACTURING EMPLOYMENT

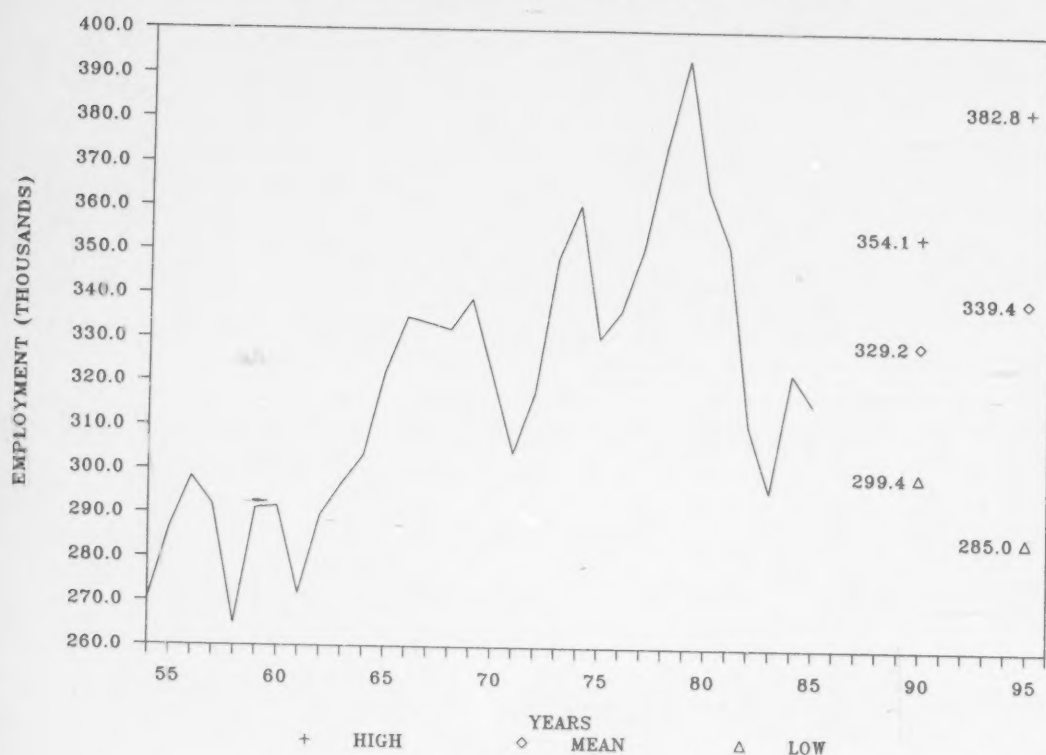


HISTORICAL EMPLOYMENT (in thousands)

1954	441.9	1961	439.0	1968	510.3	1975	507.0	1982	498.2
1955	458.0	1962	455.9	1969	420.9	1976	519.4	1983	484.1
1956	471.4	1963	461.4	1970	500.9	1977	540.4	1984	518.9
1957	463.8	1964	469.6	1971	479.6	1978	569.7	1985	514.8
1958	431.8	1965	491.9	1972	495.4	1979	591.3		
1959	459.8	1966	508.6	1973	531.7	1980	558.0		
1960	460.4	1967	508.7	1974	546.1	1981	543.5		

Manufacturing employment numbers have been mercurial in their movements in the past, and our projections are not unified in their outlook for manufacturing into the 1990's.

DURABLE GOODS MANUFACTURING EMPLOYMENT

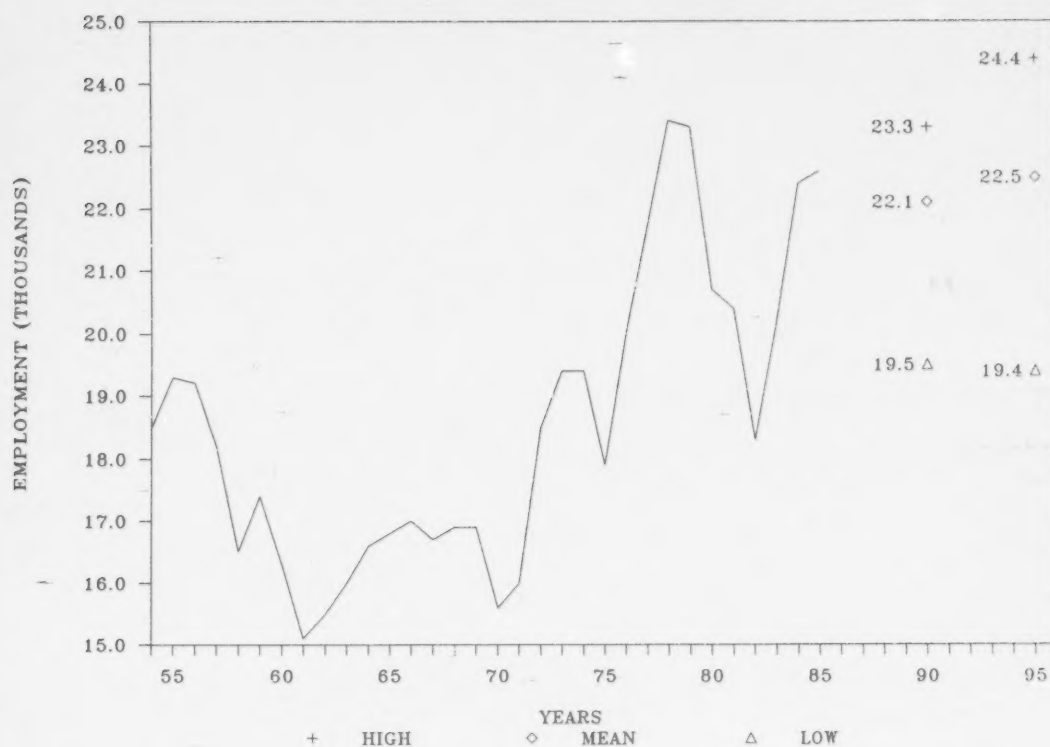


HISTORICAL EMPLOYMENT (in thousands)

1954	270.4	1961	271.9	1968	332.2	1975	330.3	1982	310.8
1955	286.5	1962	289.7	1969	339.1	1976	336.6	1983	295.7
1956	298.3	1963	296.9	1970	321.5	1977	351.1	1984	322.5
1957	292.0	1964	303.3	1971	304.2	1978	373.7	1985	315.4
1958	265.0	1965	322.5	1972	317.9	1979	393.7		
1959	291.2	1966	334.9	1973	348.4	1980	364.4		
1960	291.7	1967	333.6	1974	360.7	1981	351.5		

Durable goods manufacturing represents the majority of Wisconsin manufacturing and drives the total manufacturing numbers to a much greater extent than the nondurable goods sector.

LUMBER AND WOOD PRODUCTS EMPLOYMENT



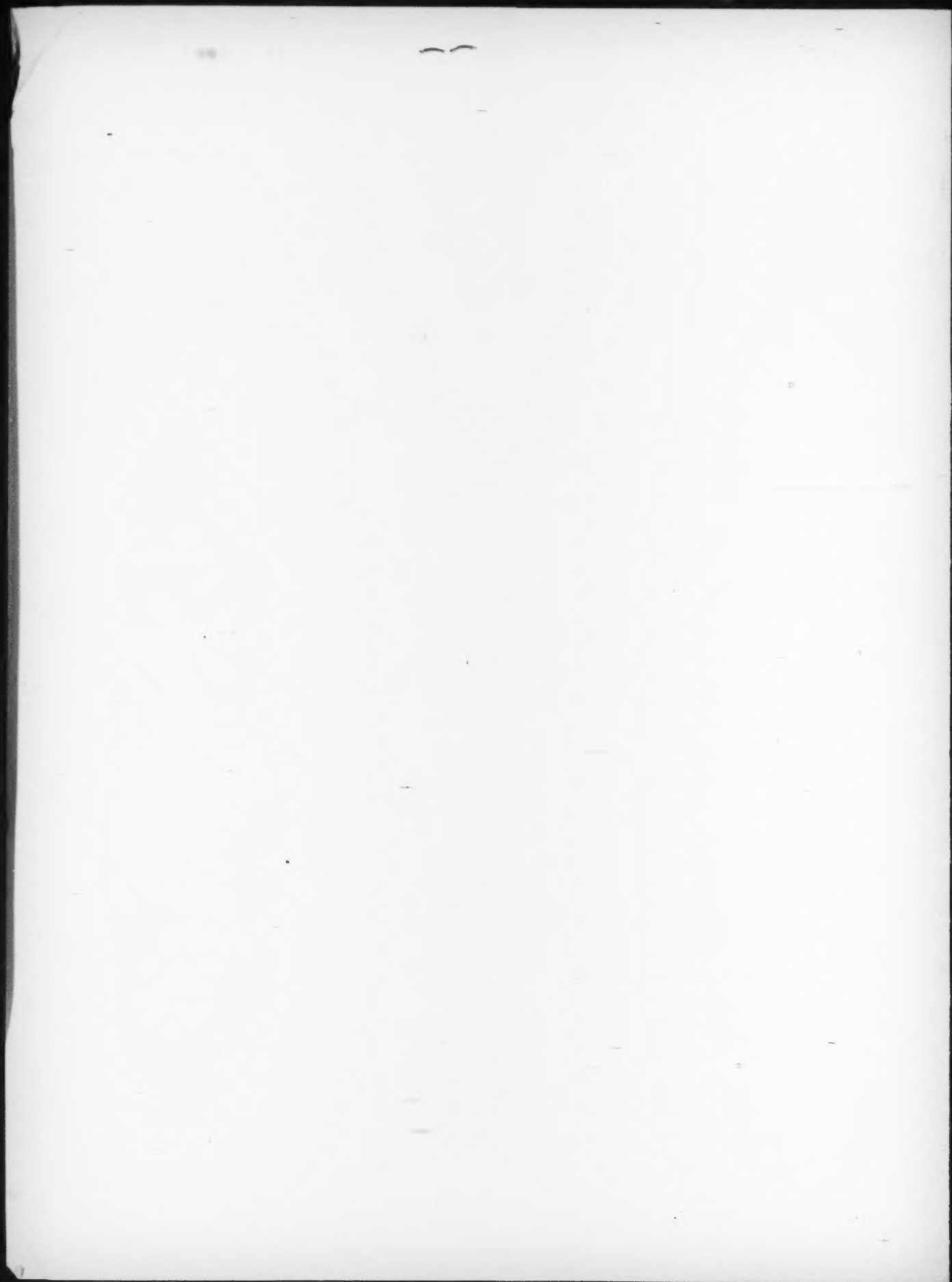
HISTORICAL EMPLOYMENT (in thousands)

1954	18.5	1961	15.1	1968	16.9	1975	17.9	1982	18.3
1955	19.3	1962	15.5	1969	16.9	1976	20.0	1983	20.2
1956	19.2	1963	16.0	1970	15.6	1977	21.7	1984	22.4
1957	18.2	1964	16.6	1971	16.0	1978	23.4	1985	22.6
1958	16.5	1965	16.8	1972	18.5	1979	23.3		
1959	17.4	1966	17.0	1973	19.4	1980	20.7		
1960	16.3	1967	16.7	1974	19.4	1981	20.4		

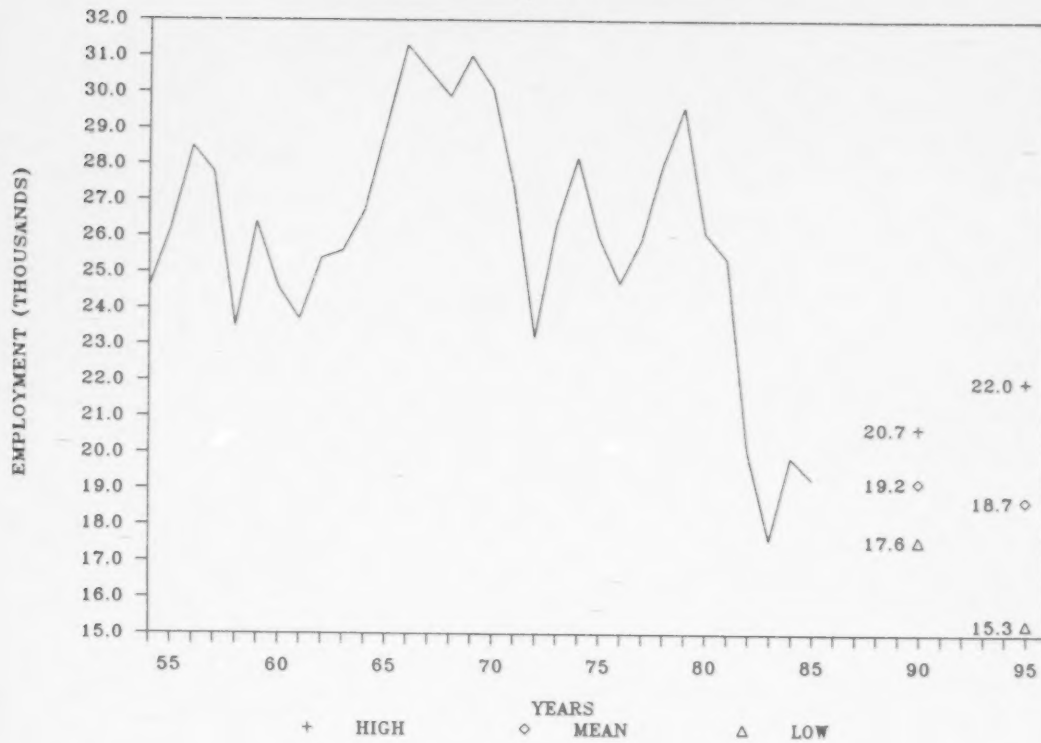
Lumber and wood products employment moves synchronously with the housing industry. The high projections do not vary from the mean as greatly as the low projections. This shows that selected economists expect a real drop in the lumber and wood products employment.

The average projection shows the lumber and wood products employment to be level to 1995.

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PRIMARY METAL INDUSTRIES EMPLOYMENT

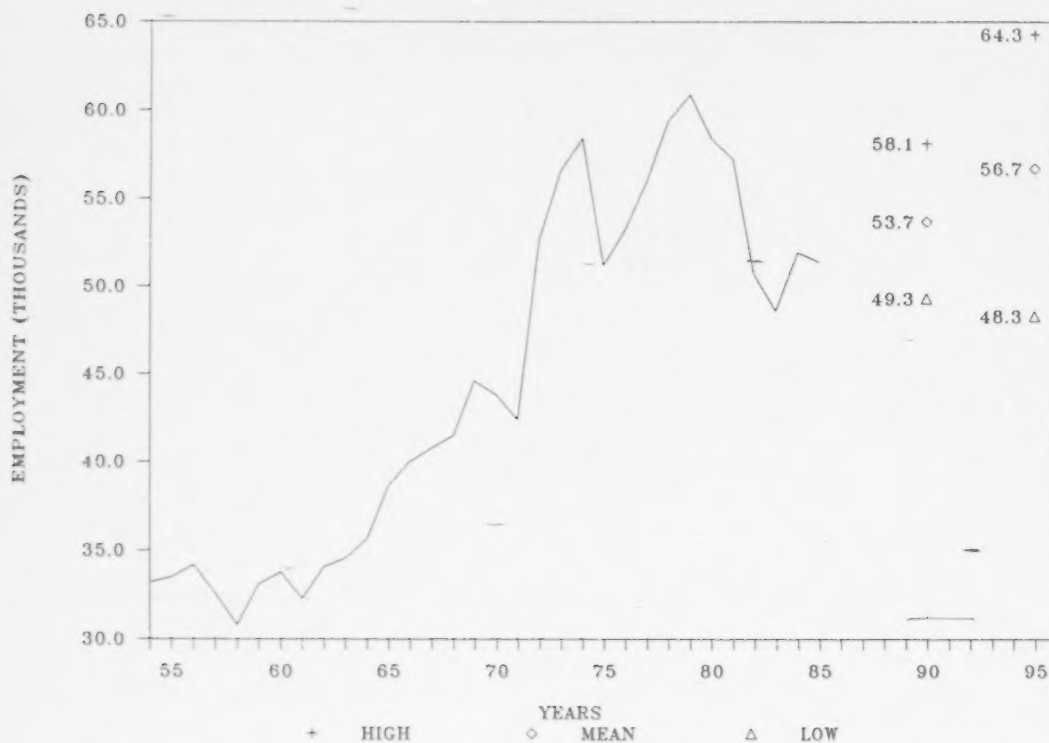


HISTORICAL EMPLOYMENT (in thousands)

1954	24.6	1961	23.7	1968	29.9	1975	26.0	1982	20.1
1955	26.2	1962	25.4	1969	31.0	1976	24.7	1983	17.6
1956	28.5	1963	25.6	1970	30.1	1977	25.9	1984	19.9
1957	27.8	1964	26.7	1971	27.4	1978	28.0	1985	19.3
1958	23.5	1965	29.0	1972	23.2	1979	29.6		
1959	26.4	1966	31.3	1973	26.3	1980	26.1		
1960	24.6	1967	30.6	1974	28.2	1981	25.4		

Equipment for construction, agriculture and mining are the products of the primary metal industry. Since 1980 the employment in these industries have not rebounded, so demand for equipment has remained low.

FABRICATED METAL PRODUCTS EMPLOYMENT

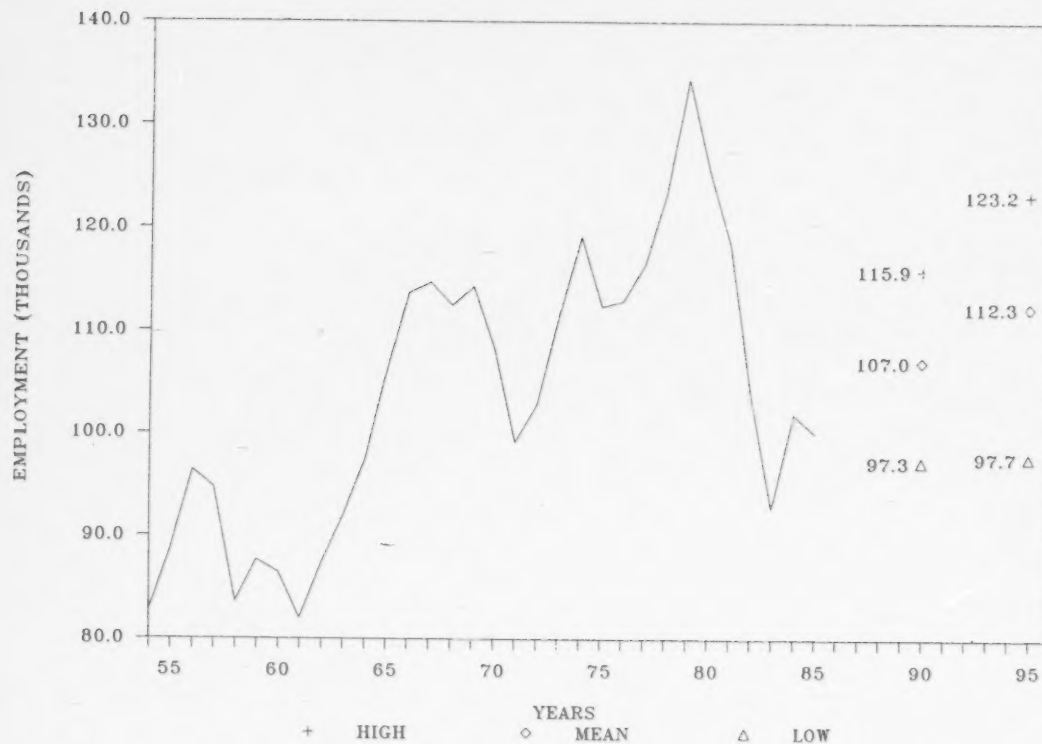


HISTORICAL EMPLOYMENT (in thousands)

1954	33.2	1961	32.3	1968	41.5	1975	51.2	1982	50.7
1955	33.5	1962	34.1	1969	44.6	1976	53.2	1983	48.6
1956	34.2	1963	34.6	1970	43.8	1977	56.0	1984	51.9
1957	32.6	1964	35.7	1971	42.4	1978	59.4	1985	51.4
1958	30.8	1965	38.7	1972	52.7	1979	60.9		
1959	33.1	1966	40.0	1973	56.6	1980	58.4		
1960	33.8	1967	40.8	1974	58.4	1981	57.2		

Although the highest projections suggests that fabricated metal products could grow beyond its all time high reached in 1979, prior to the 1980 and 1983 recessions, the overall expectations for employment growth in the industry do not show it returning to its 1979 high.

NONELECTRICAL MACHINERY EMPLOYMENT

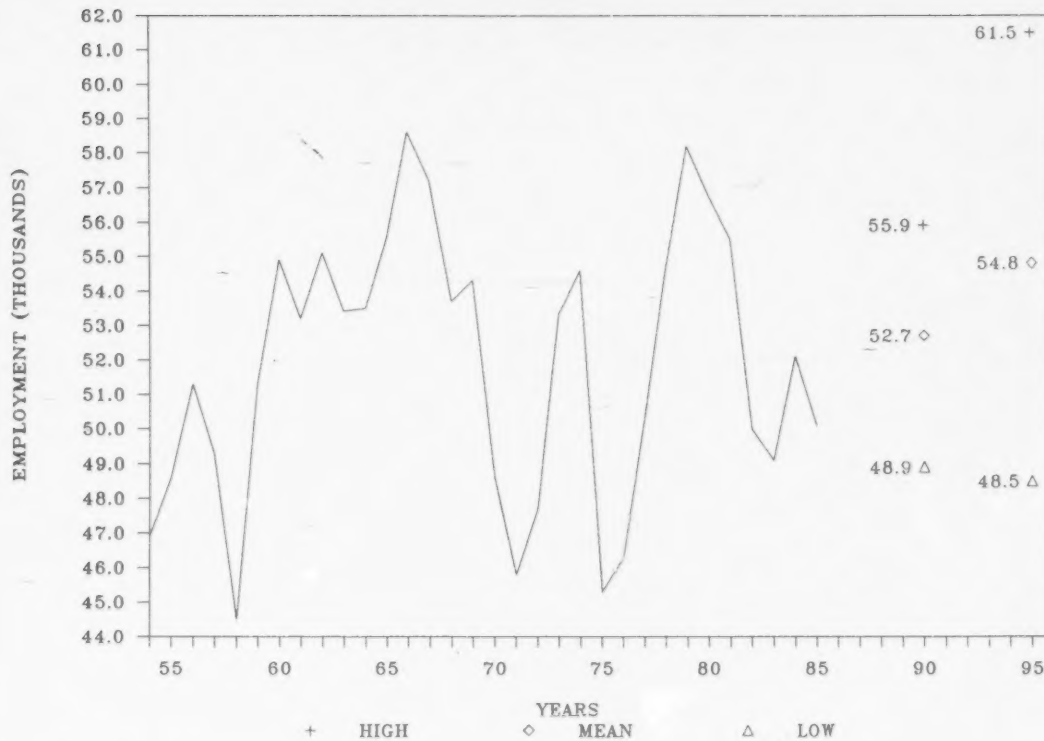


HISTORICAL EMPLOYMENT (in thousands)

1954	82.7	1961	82.0	1968	112.5	1975	112.4	1982	103.9
1955	88.7	1962	87.4	1969	114.3	1976	112.9	1983	92.7
1956	96.4	1963	92.0	1970	108.2	1977	116.5	1984	101.9
1957	94.8	1964	97.5	1971	99.2	1978	123.4	1985	100.1
1958	83.6	1965	106.2	1972	102.8	1979	134.5		
1959	87.7	1966	113.7	1973	111.5	1980	125.7		
1960	86.5	1967	114.7	1974	119.1	1981	118.4		

This major sector of durable goods manufacturing plummeted from 1980 to 1983, and the major sectors of engines and turbines, farm equipment, and metalworking machinery have yet to follow up on the increases shown in 1984.

ELECTRICAL MACHINERY EMPLOYMENT

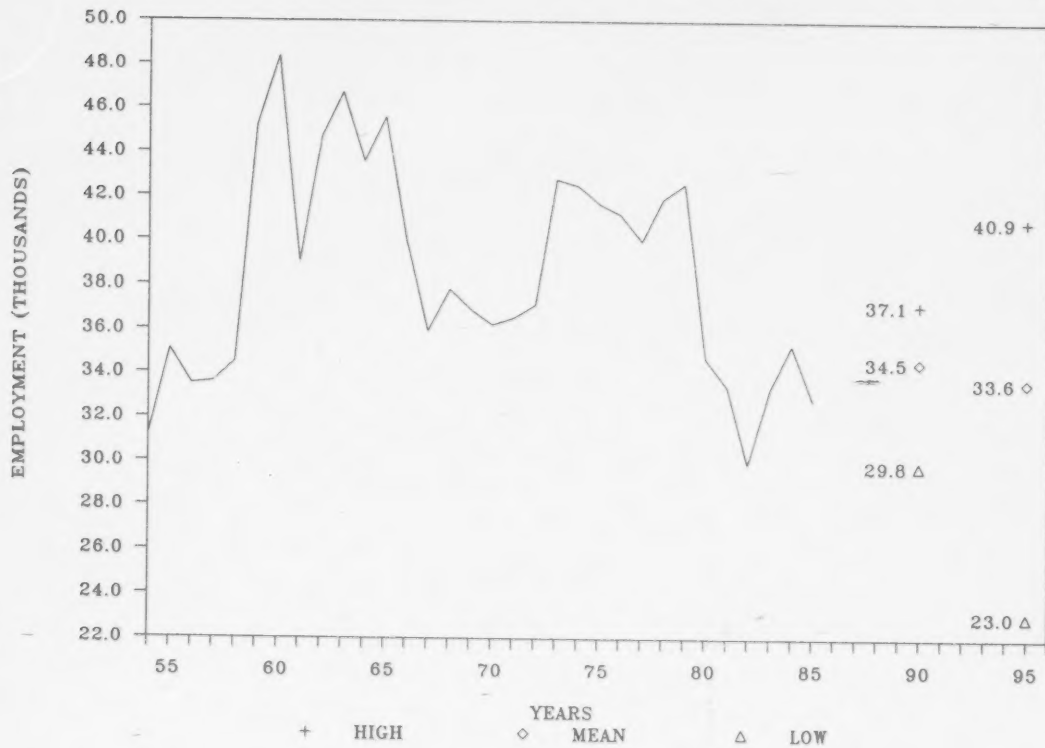


HISTORICAL EMPLOYMENT (in thousands)

1954	46.9	1961	53.2	1968	53.7	1975	45.3	1982	50.0
1955	48.6	1962	55.1	1969	54.3	1976	46.3	1983	49.1
1956	51.3	1963	53.4	1970	48.6	1977	50.3	1984	52.1
1957	49.3	1964	53.5	1971	45.8	1978	54.6	1985	50.1
1958	44.5	1965	55.5	1972	47.7	1979	58.2		
1959	51.3	1966	58.6	1973	53.3	1980	56.8		
1960	54.9	1967	57.2	1974	54.6	1981	55.5		

The consensus about the future of electrical machinery employment in Wisconsin is that there is no consensus. The volatility of the employment in electrical machinery makes it difficult to discern any trends in the industry employment patterns. This industry's major sector electrical industrial apparatus has shown no signs of strength to the present, lending weight to the validity of low to moderate growth in employment in this grouping.

TRANSPORTATION EQUIPMENT EMPLOYMENT

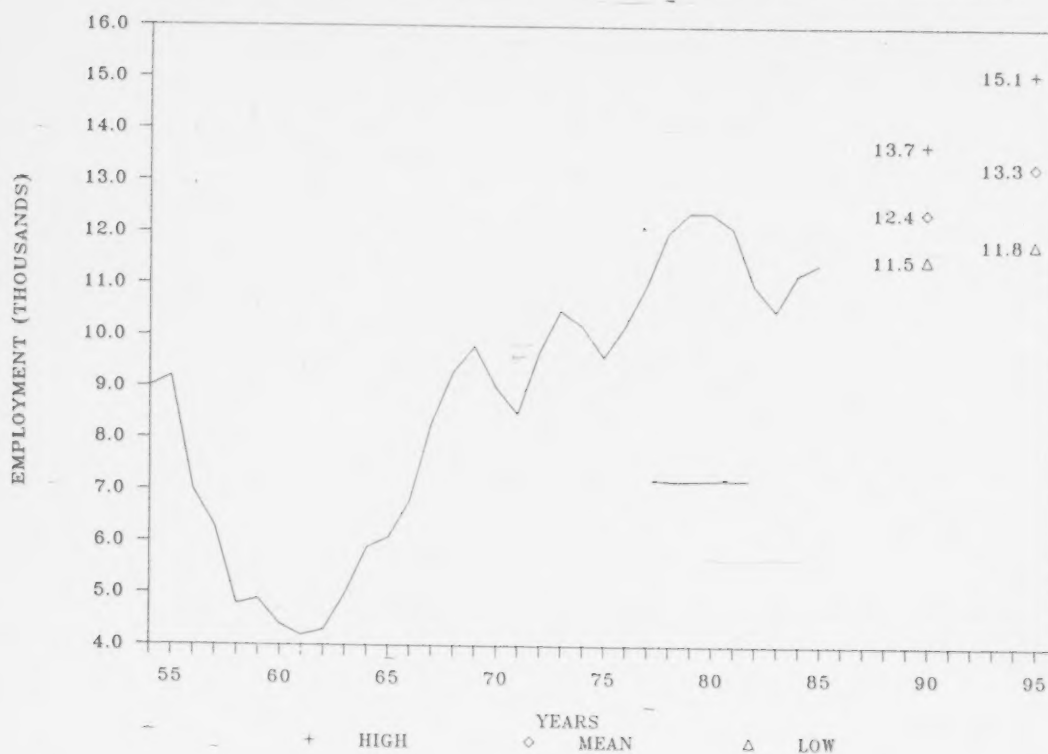


HISTORICAL EMPLOYMENT (in thousands)

1954	31.2	1961	39.0	1968	37.8	1975	41.7	1982	29.9
1955	35.1	1962	44.7	1969	36.9	1976	41.2	1983	33.3
1956	33.5	1963	46.7	1970	36.2	1977	40.0	1984	35.3
1957	33.6	1964	43.6	1971	36.5	1978	41.9	1985	32.8
1958	34.5	1965	45.6	1972	37.1	1979	42.6		
1959	45.2	1966	40.0	1973	42.8	1980	34.7		
1960	48.4	1967	35.9	1974	42.5	1981	33.4		

The auto industry in the state operates in a national market under considerable pressure to become more automated to compete with lower cost foreign labor. An increase in auto industry employment in early 1987 is expected as Chrysler Corporation moves into the state.

PROFESSIONAL, SCIENTIFIC, AND CONTROL INSTRUMENTS EMPLOYMENT

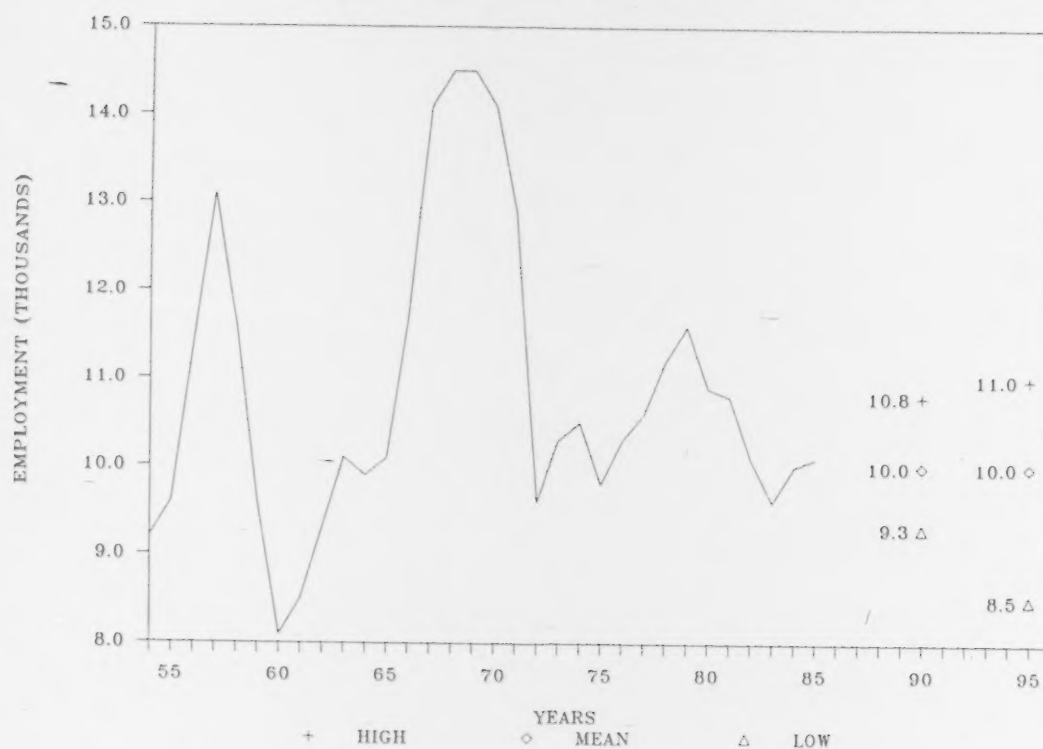


HISTORICAL EMPLOYMENT (in thousands)

1954	9.0	1961	4.2	1968	9.3	1975	9.6	1982	11.0
1955	9.2	1962	4.3	1969	9.8	1976	10.2	1983	10.5
1956	7.0	1963	5.0	1970	9.0	1977	11.0	1984	11.2
1957	6.3	1964	5.9	1971	8.5	1978	12.0	1985	11.4
1958	4.8	1965	6.1	1972	9.7	1979	12.4		
1959	4.9	1966	6.8	1973	10.5	1980	12.4		
1960	4.4	1967	8.3	1974	10.2	1981	12.1		

This "high technology" and mostly low paying industry has been growing dramatically since 1962. Manufacturing of engineering, laboratory, scientific, research, optical and surgical instruments are sold to a national and international market. It is one of two industries with only positive growth projections regardless of assumptions about economic conditions.

MISCELLANEOUS MANUFACTURING EMPLOYMENT

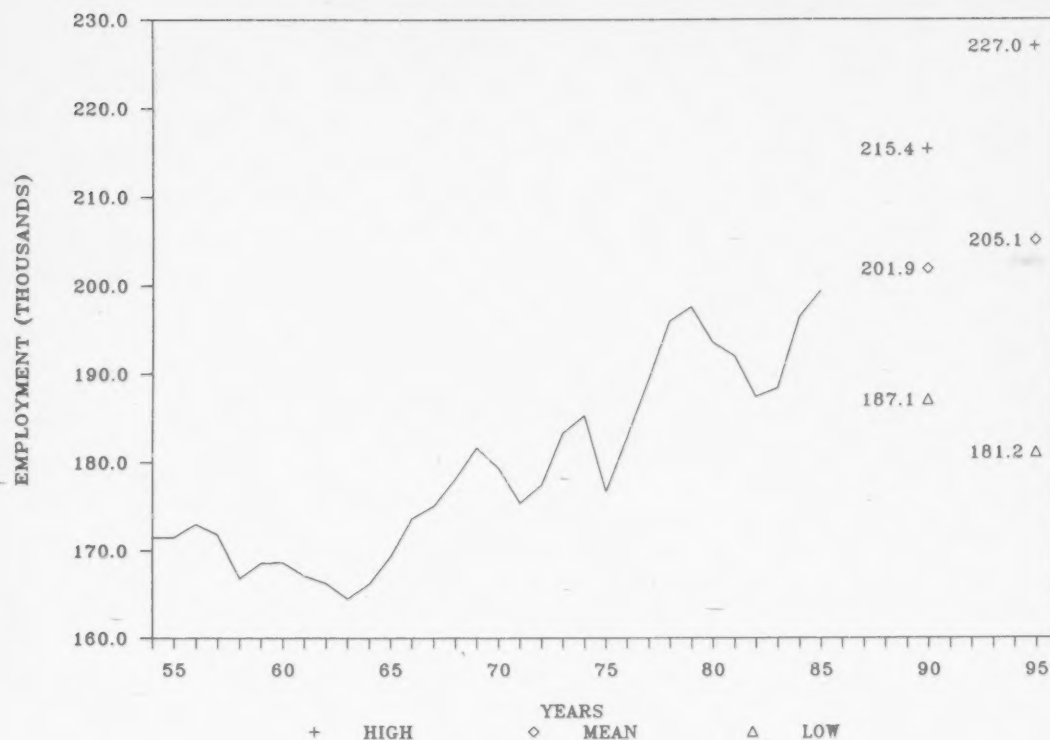


HISTORICAL EMPLOYMENT (in thousands)

1954	9.2	1961	8.5	1968	14.5	1975	9.8	1982	10.1
1955	9.6	1962	9.3	1969	14.5	1976	10.3	1983	9.6
1956	11.4	1963	10.1	1970	14.1	1977	10.6	1984	10.0
1957	13.1	1964	9.9	1971	12.9	1978	11.2	1985	10.1
1958	11.6	1965	10.1	1972	9.6	1979	11.6		
1959	9.6	1966	11.7	1973	10.3	1980	10.9		
1960	8.1	1967	14.1	1974	10.5	1981	10.7		

The historical data for this industry are not strictly comparable with those reported after 1975. Prior to 1975, employment for ordnance production was also included with this category; with the revision of the classification system adopted in 1975, the major components of this grouping include manufacturers of jewelry, silverware, toys, sporting goods, and pens and pencils. Many of the items in this group represent discretionary purchases, especially for the higher cost items. Our panel's alternative forecasts for future employment in this group depended primarily on their expectations for growth in disposable income.

NONDURABLE GOODS MANUFACTURING EMPLOYMENT

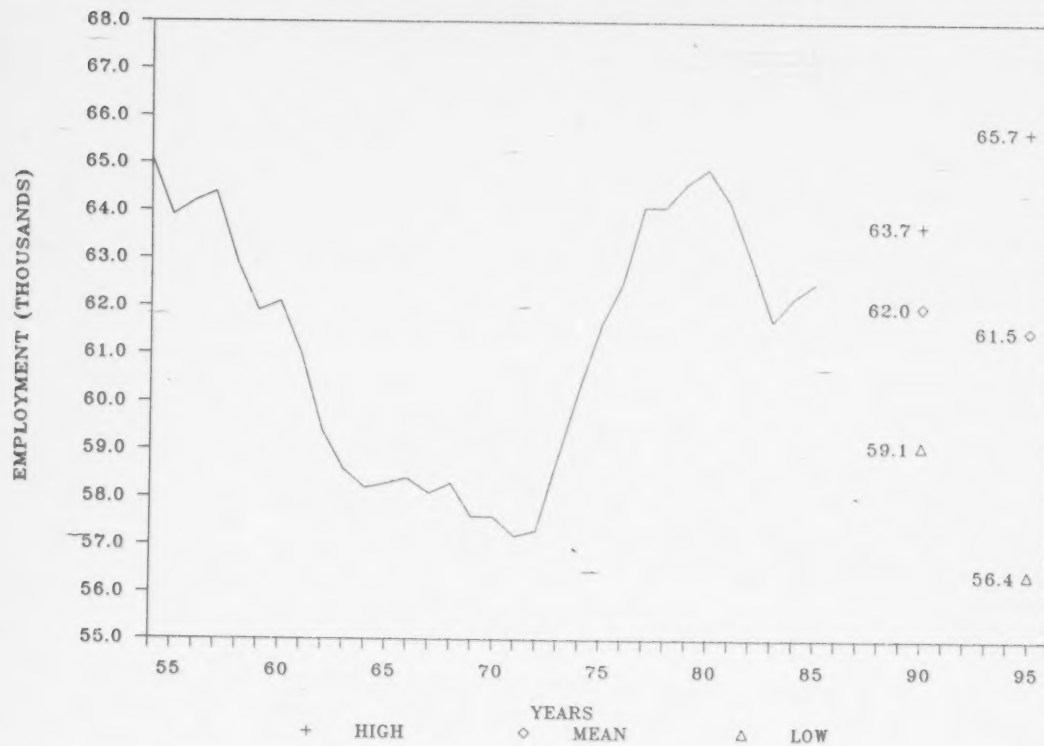


HISTORICAL EMPLOYMENT (in thousands)

1954	171.5	1961	167.1	1968	178.2	1975	176.7	1982	187.4
1955	171.5	1962	166.3	1969	181.7	1976	182.8	1983	188.4
1956	173.0	1963	164.5	1970	179.4	1977	189.3	1984	196.4
1957	171.8	1964	166.2	1971	175.4	1978	196.0	1985	199.4
1958	166.8	1965	169.4	1972	177.5	1979	197.6		
1959	168.6	1966	173.7	1973	183.3	1980	193.6		
1960	168.7	1967	175.1	1974	185.3	1981	192.0		

The textile, leather, and apparel products industries are the three small and almost continuously declining industries that tend to pull down this less cyclical portion of manufacturing.

FOOD AND KINDRED PRODUCTS EMPLOYMENT

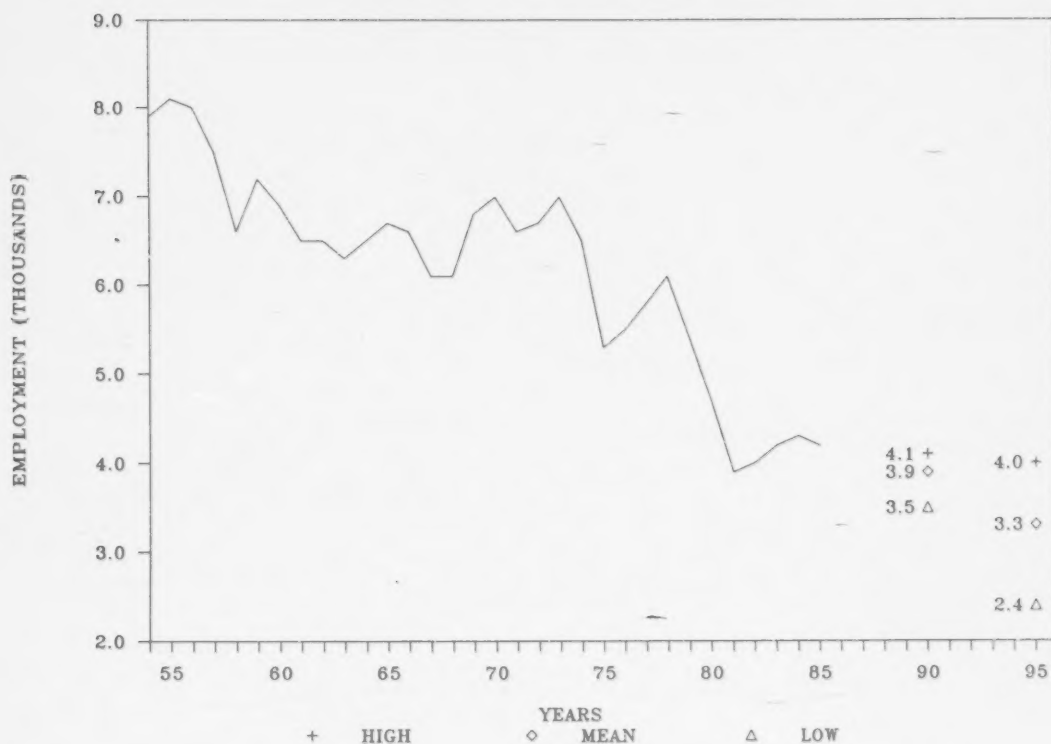


HISTORICAL EMPLOYMENT (in thousands)

1954	65.1	1961	61.0	1968	58.3	1975	61.6	1982	63.0
1955	63.9	1962	59.4	1969	57.6	1976	62.5	1983	61.7
1956	64.2	1963	58.6	1970	57.6	1977	64.1	1984	62.2
1957	64.4	1964	58.2	1971	57.2	1978	64.1	1985	62.5
1958	62.9	1965	58.3	1972	57.3	1979	64.6		
1959	61.9	1966	58.4	1973	58.8	1980	64.9		
1960	62.1	1967	58.1	1974	60.3	1981	64.2		

Employment growth in this industry group, the major sectors of which are meat and dairy products, is projected to remain flat. Members of our panel varied greatly in their estimation of the impacts of the changing nature of the American consumers' diet on employment in this industry. Most agreed that the anticipated changes do not bode well for producers of red meat or products heavy in butterfat, such as cheese or ice cream. Others cited the trend to move packing facilities closer to large groups of consumers in the south and west as being likely to dampen long term employment growth in the industry in the state.

TEXTILE MILL PRODUCTS EMPLOYMENT

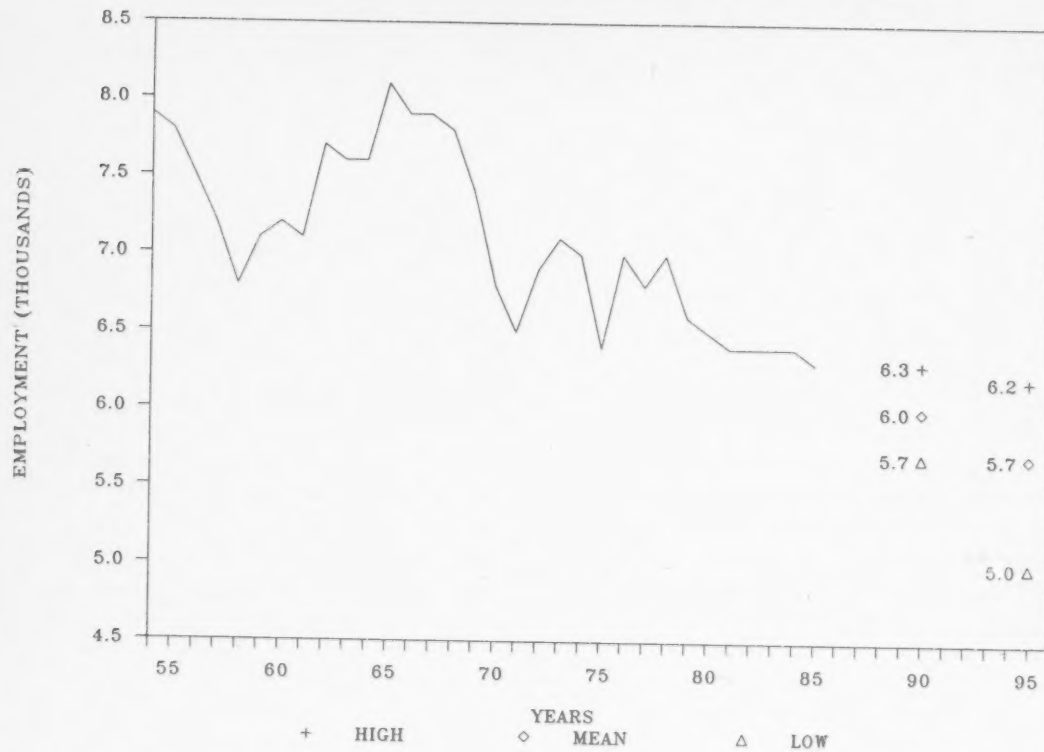


HISTORICAL EMPLOYMENT (in thousands)

1954	7.9	1961	6.5	1968	6.1	1975	5.3	1982	4.0
1955	8.1	1962	6.5	1969	6.8	1976	5.5	1983	4.2
1956	8.0	1963	6.3	1970	7.0	1977	5.8	1984	4.3
1957	7.5	1964	6.5	1971	6.6	1978	6.1	1985	4.2
1958	6.6	1965	6.7	1972	6.7	1979	5.4		
1959	7.2	1966	6.6	1973	7.0	1980	4.7		
1960	6.9	1967	6.1	1974	6.5	1981	3.9		

This very small component of Wisconsin manufacturing is projected to get even smaller as companies move to lower wage areas of the country and the world. The major sector of the textile industry in Wisconsin is the "knitting mills" sector. Large drops follow small rises as this industry has declined almost from the beginning of the data series.

APPAREL AND OTHER FINISHED MILL PRODUCTS EMPLOYMENT

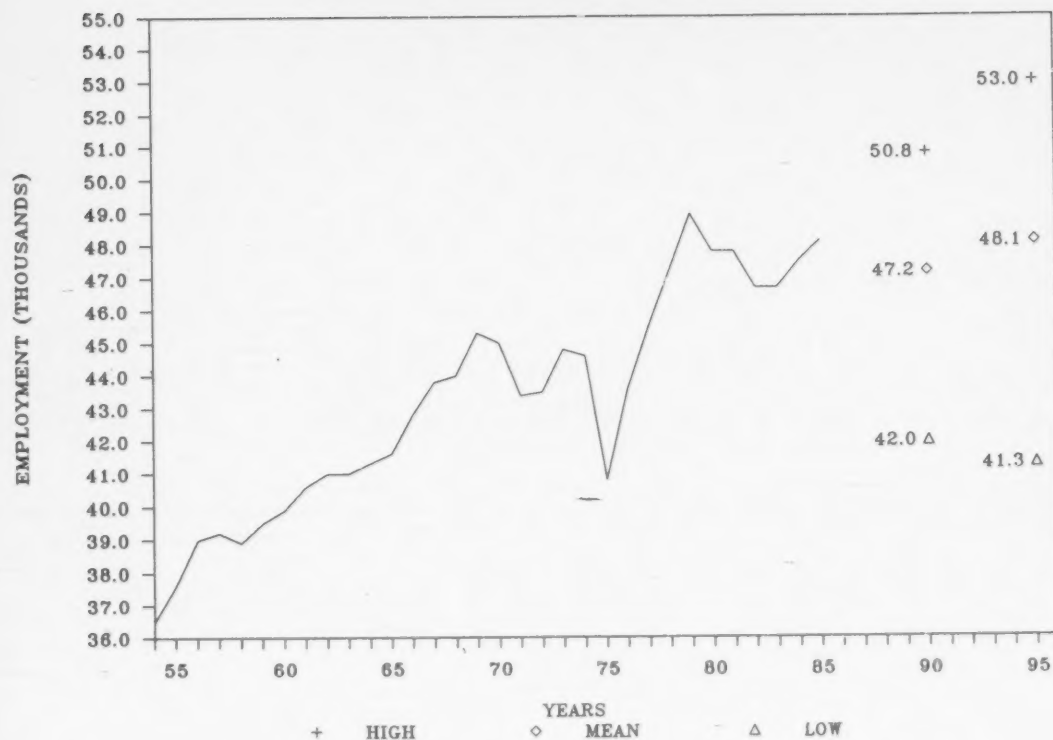


HISTORICAL EMPLOYMENT (in thousands)

1954	7.9	1961	7.1	1968	7.8	1975	6.4	1982	6.4
1955	7.8	1962	7.7	1969	7.4	1976	7.0	1983	6.4
1956	7.5	1963	7.6	1970	6.8	1977	6.8	1984	6.4
1957	7.2	1964	7.6	1971	6.5	1978	7.0	1985	6.3
1958	6.8	1965	8.1	1972	6.9	1979	6.6		
1959	7.1	1966	7.9	1973	7.1	1980	6.5		
1960	7.2	1967	7.9	1974	7.0	1981	6.4		

Wisconsin's largest subsector of **apparel** is men's, youth's, and boy's clothing which includes athletic clothing and winter coats and jackets.* Small and declining describes this industry which is projected to continue to decline. All projectors agree on this decline, the only variation being in the amount.

PAPER AND ALLIED PRODUCTS EMPLOYMENT

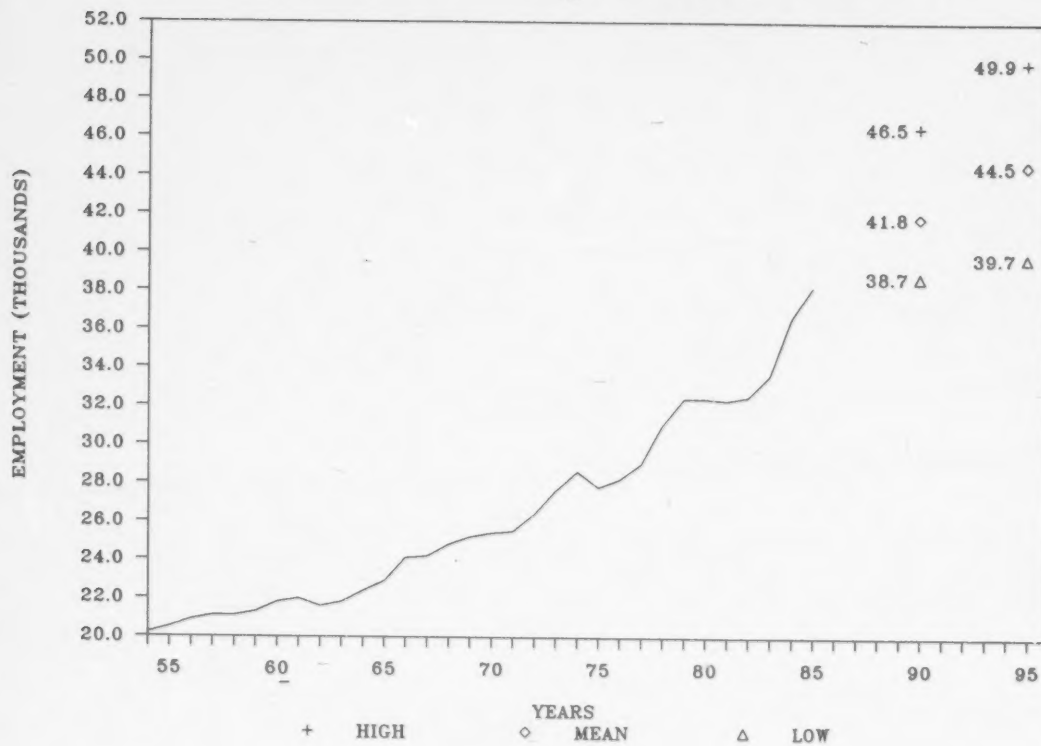


HISTORICAL EMPLOYMENT (in thousands)

1954	36.5	1961	40.6	1968	44.0	1975	40.8	1982	46.7
1955	37.6	1962	41.0	1969	45.3	1976	43.6	1983	46.7
1956	39.0	1963	41.0	1970	45.0	1977	45.5	1984	47.5
1957	39.2	1964	41.3	1971	43.4	1978	47.2	1985	48.1
1958	38.9	1965	41.6	1972	43.5	1979	48.9		
1959	39.5	1966	42.8	1973	44.8	1980	47.9		
1960	39.9	1967	43.8	1974	44.6	1981	47.8		

Disposable products have the greatest growth potential for the paper industry, but other market sectors have not shown such strong growth tendencies. Increased demand will more likely be met with increased use of automation and consequent productivity gains, not new employment.

PRINTING, PUBLISHING, AND ALLIED PRODUCTS EMPLOYMENT

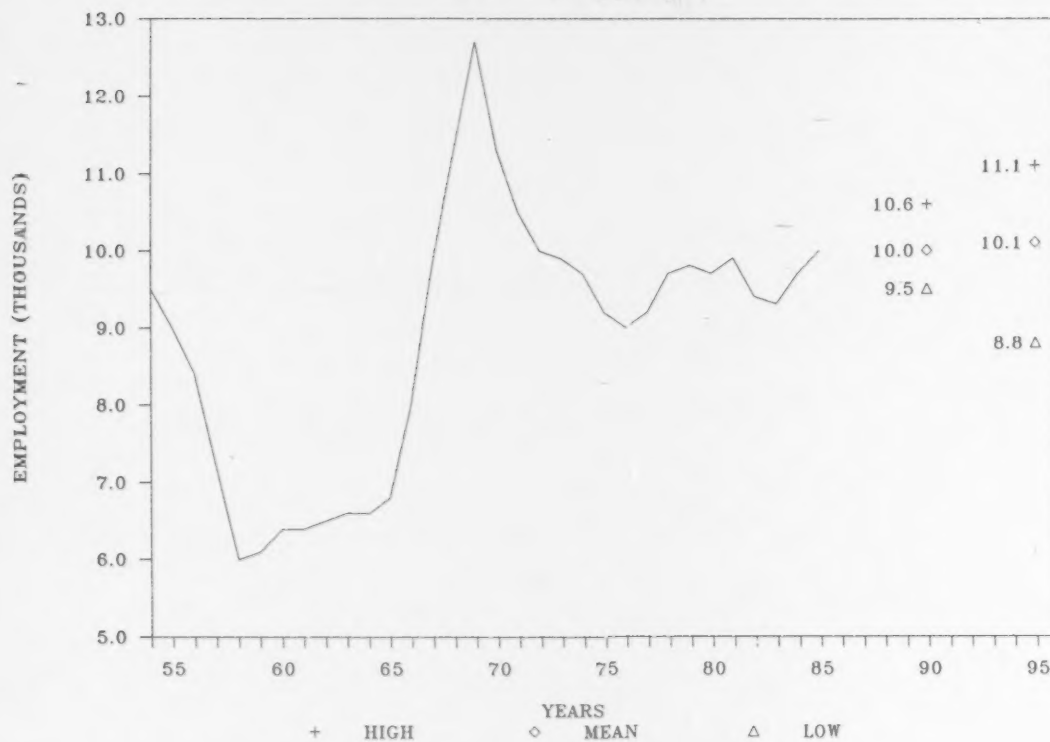


HISTORICAL EMPLOYMENT (in thousands)

1954	20.2	1961	22.0	1968	24.8	1975	27.8	1982	32.5
1955	20.5	1962	21.6	1969	25.2	1976	28.2	1983	33.6
1956	20.9	1963	21.8	1970	25.4	1977	29.0	1984	36.6
1957	21.1	1964	22.4	1971	25.5	1978	31.0	1985	38.2
1958	21.1	1965	22.9	1972	26.4	1979	32.4		
1959	21.3	1966	24.1	1973	27.6	1980	32.4		
1960	21.8	1967	24.2	1974	28.6	1981	32.3		

Computerized desk-top publishing is revolutionizing the industry. Increased use of electronic storage and transfer media has not diminished the use of paper copy for the wide distribution of output. The panel foresees the growth rate declining somewhat from the past two years, but assumes that employment in the industry will move ahead strongly to 1995.

CHEMICALS AND ALLIED PRODUCTS EMPLOYMENT

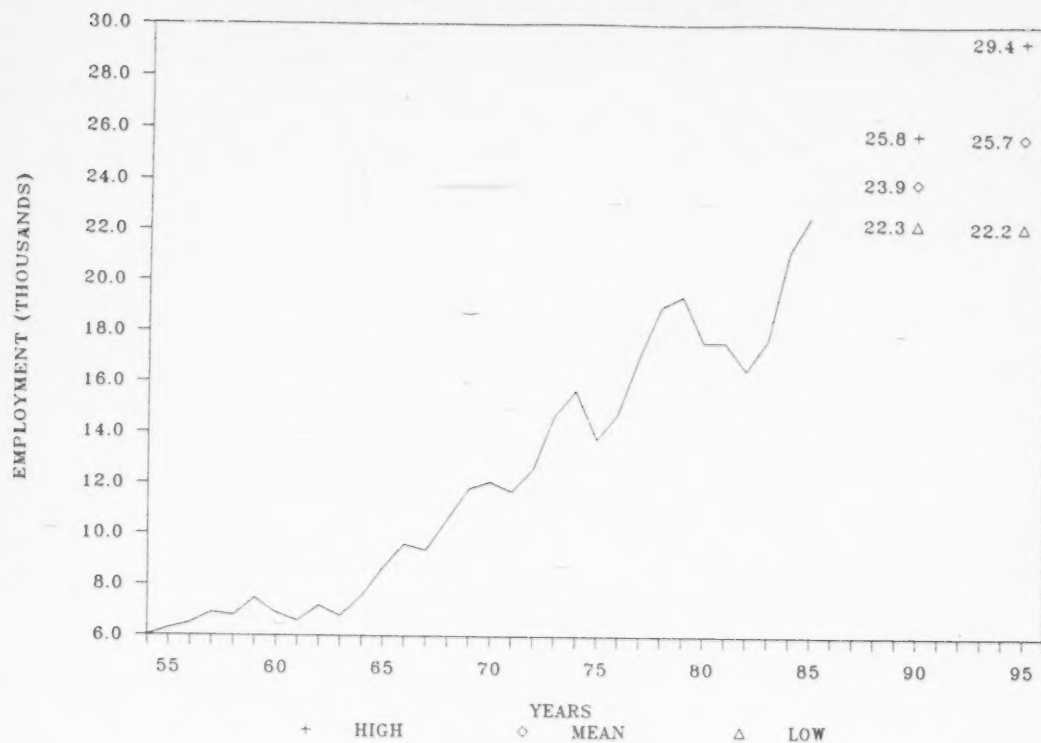


HISTORICAL EMPLOYMENT (in thousands)

1954	9.5	1961	6.4	1968	11.3	1975	9.2	1982	9.4
1955	9.0	1962	6.5	1969	12.7	1976	9.0	1983	9.3
1956	8.4	1963	6.6	1970	11.3	1977	9.2	1984	9.7
1957	7.2	1964	6.6	1971	10.5	1978	9.7	1985	10.0
1958	6.0	1965	6.8	1972	10.0	1979	9.8		
1959	6.1	1966	8.0	1973	9.9	1980	9.7		
1960	6.4	1967	9.8	1974	9.7	1981	9.9		

The growth rate of employment in the manufacture of plastics, drugs, soaps, paints and agricultural chemicals is projected to be flat. The high growth potential of some of these product areas, if it occurs, will likely be taken up by automated manufacturing processes. The two peaks in the historical series occurred in wartime conditions ruled out in our basic assumptions.

RUBBER AND MISCELLANEOUS PRODUCTS EMPLOYMENT

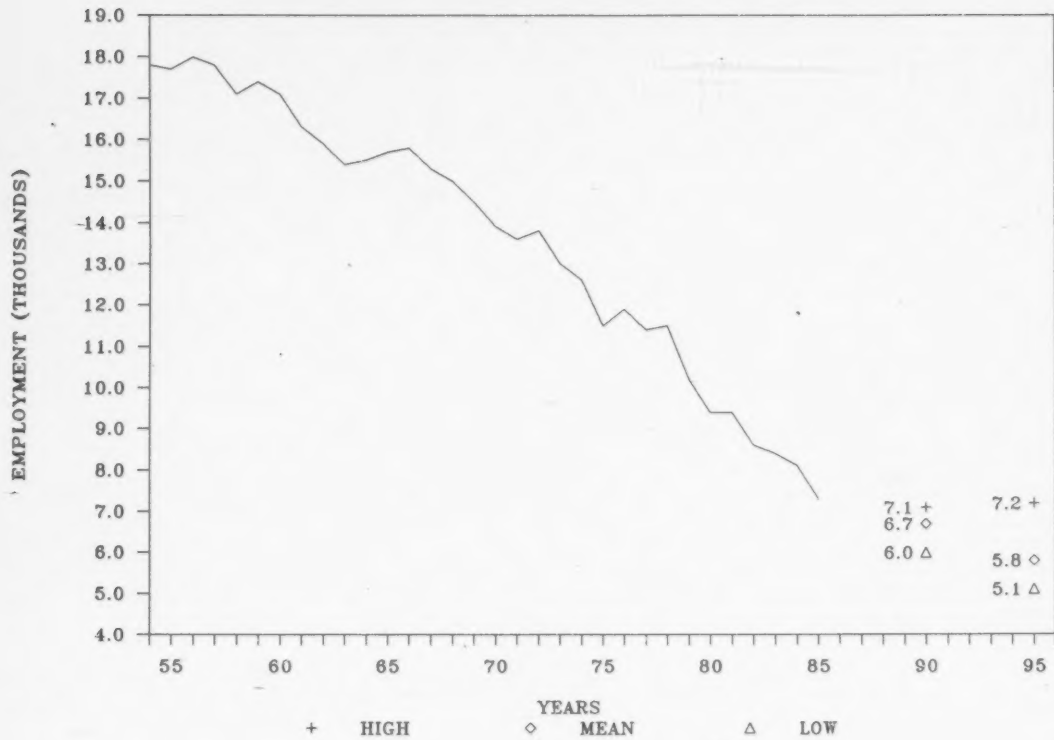


HISTORICAL EMPLOYMENT (in thousands)

1954	6.0	1961	6.6	1968	10.6	1975	13.8	1982	16.5
1955	6.3	1962	7.2	1969	11.8	1976	14.8	1983	17.7
1956	6.5	1963	6.8	1970	12.1	1977	17.1	1984	21.2
1957	6.9	1964	7.6	1971	11.7	1978	19.0	1985	22.6
1958	6.8	1965	8.7	1972	12.6	1979	19.4		
1959	7.5	1966	9.6	1973	14.7	1980	17.6		
1960	6.9	1967	9.4	1974	15.7	1981	17.6		

The auto and construction markets drive the need for plastic products. Although the demand for autos and houses is volatile, the percentage of plastics going into these products is constantly increasing. Employment in this industry has increased by 277 percent since 1954.

LEATHER AND LEATHER PRODUCTS EMPLOYMENT



HISTORICAL EMPLOYMENT (in thousands)

1954	17.8	1961	16.3	1968	15.0	1975	11.5	1982	8.6
1955	17.7	1962	15.9	1969	14.5	1976	11.9	1983	8.4
1956	18.0	1963	15.4	1970	13.9	1977	11.4	1984	8.1
1957	17.8	1964	15.5	1971	13.6	1978	11.5	1985	7.3
1958	17.1	1965	15.7	1972	13.8	1979	10.2		
1959	17.4	1966	15.8	1973	13.0	1980	9.4		
1960	17.1	1967	15.3	1974	12.6	1981	9.4		

Footwear is the major component of the leather industry in Wisconsin. Producers in Wisconsin and in the U.S. as a whole have closed many establishments as productions have shifted to overseas locations. This trend is projected to continue through 1995.

CHAPTER 3

Occupational Projections to 1995

The kinds of jobs available in Wisconsin in the 1990's will depend upon the goods and services being produced and the tasks involved in producing them. Because industries employ different mixes of workers, expansion or decline in particular industries affects growth in individual occupations. Moreover, as industries adopt new methods for producing goods and services, they change the kind and mix of skills needed in their workforce. Both of these factors will contribute to the occupational changes projected for Wisconsin to 1995.

This chapter presents the most recent occupational projections developed for Wisconsin by the Bureau of Labor Market Information. These projections were developed by applying information on trends in industrial staffing patterns in the state to the moderate estimate of industrial employment growth described in the previous chapter. Like the industry projections on which they are based, the occupational projections include only workers in the nonfarm wage and salary portion of Wisconsin's labor force. Excluded from the projections are the self-employed including farm owner-operators.

The chapter is divided into two sections: Section A describes the overall trends in occupational change for the state as a whole; Section B presents detailed occupationally-specific projections for expected job growth and total openings for Wisconsin to 1995.

3.A. OCCUPATIONAL TRENDS IN WISCONSIN

Changes in the level of employment by occupation provides one indicator of the demand for workers with particular skills. Estimate of replacement needs due to labor force separations provides another indicator of occupational demand. Together job growth and replacement needs by occupation describe the total number of openings expected for each occupation.

Employment Growth

Over the last twenty-five years the rapid expansion of service sector employment and relative stagnation of manufacturing employment have profoundly altered the state's occupational structure, increasing the number of workers in **professional, paraprofessional, and technical** occupations and in **sales and service** occupations at the expense of those in **clerical and administrative support** occupations and in **production, operative, and maintenance** occupations. Despite continued growth expected in the overall service providing portion of the state's economy, the distribution of employment by major occupational group in the state is expected to change only marginally between 1985 and 1995 as low growth rates in larger occupational categories are balanced out by slower growth in smaller categories. (See Table 8.)

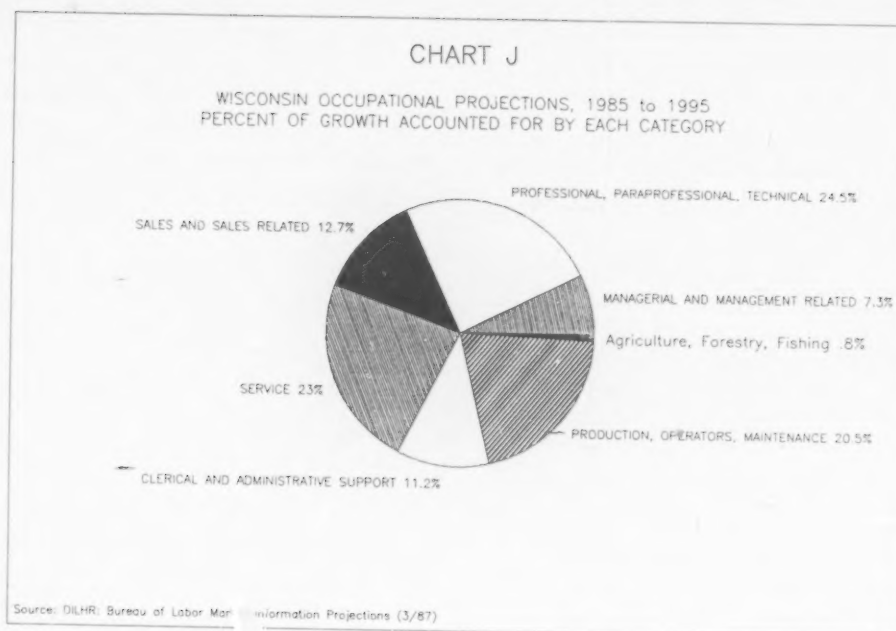
Most new jobs in Wisconsin's economy over the next ten years will be found in the **professional, paraprofessional, and technical** occupations, the **service** occupations, and the **production, operative, and maintenance** occupations. These categories will be responsible for adding nearly 70 percent of all new jobs to the economy between 1985 and 1995 in roughly equal shares. Employment in **sales and related occupations** will add 13 percent of the new jobs, **managerial and administrative** occupations 7 percent, and **clerical and administrative support** occupations 13 percent. (See Chart J.)

TABLE 8

NON-AGRICULTURAL WAGE AND SALARY EMPLOYMENT
IN WISCONSIN BY OCCUPATIONAL GROUPINGS
1985 PROJECTED TO 1995

OCCUPATION CODE	OCCUPATION TITLE	PROJECTED				PROJECTED		
		ANNUAL AVERAGE EMPLOYMENT 1985	ANNUAL AVERAGE EMPLOYMENT 1995	PROJECTED CHANGE IN EMPLOYMENT 1985-95	PERCENTAGE INCREASE 1985-95	DUE TO GROWTH	DUE TO SEPARATIONS	TOTAL
	TOTAL, ALL OCCUPATIONS	1978580	2212190	233610	12%	23390	67590	90980
10000001	MANAGERIAL & MGT. RELATED OCC.	125410	142380	16970	14%	1700	5360	7060
20000000	PROFESSIONAL, PARAPROFESS., TECH.	366400	423620	57220	16%	5730	10460	16190
21000024	MANAGEMENT SUPPORT	21630	26160	4530	21%	450	650	1110
21300000	PURCHASING AGENTS AND BUYERS	7550	8410	860	11%	90	330	420
21500000	PERSONNEL SPEC. AND RELATED	6620	7240	620	9%	60	150	210
21900000	OTHER MANAGEMENT SUPPORT	12520	14200	1680	13%	170	320	490
22000050	ENGINEERS, ARCHITECTS, SURVEY.	35260	42190	6930	20%	700	840	1540
24000075	NATURAL, COMPUTER, MATH SCI.	8830	9740	910	10%	90	160	250
25000000	COMPUTER AND MATHEMATICAL	13310	16190	2880	22%	290	100	390
27100000	SOCIAL SCIENTISTS, RECR, RELIG	19410	22640	3230	17%	330	870	1200
28000000	LAW AND RELATED	7680	9330	1650	21%	170	500	660
31000111	TEACHERS, LIBRAR., COUNSELORS	118690	129910	11220	9%	1120	3480	4610
32000209	HEALTH PRACTITIONERS, TECHN.	80500	97750	17250	21%	1730	2190	3920
34000170	WRITER, ARTIST, ENTER, ATHLETE	15930	18650	2720	17%	270	550	820
35000191	OTHER PROFESS. AND TECHNICAL	18460	21200	2740	15%	270	310	590
40000253	SALES & RELATED OCCUPATIONS	191900	221500	29600	15%	2960	8260	11220
50000276	CLERICAL & ADMIN. SUPPORT OCC.	325380	351720	26340	8%	2630	10090	12730
60000373	SERVICE OCCUPATIONS	343170	396990	53820	16%	5390	14750	20140
70000467	AGRICULTURE, FORESTRY, FISHING	14840	16770	1930	13%	190	818	1010
80000000	PRODUCTION, OPER., MAINTENANCE	611490	659220	47730	8%	4790	17860	22650

Source: DILHR: Bureau of Labor Market Information Projections (2/87)



The fastest growing occupations in Wisconsin and in the country as a whole tend to be **professional, paraprofessional, and technical** jobs. Table 9 describes the 35 fastest growing occupations in the state with more than 50 employees in 1985. These 35 occupations include 5 percent of the occupational categories, but 14 percent of the expected new job growth. As Table 9 indicates, most of these fast growing technical occupations are concentrated in the rapidly growing **business services** and **health care** industries in the state.

As the data in Table 9 illustrates, rapidly growing occupational categories in the state do not necessarily generate large numbers of new jobs. In only eleven of the 35 occupations do we expect total employment to grow by more than 500 jobs between 1985 and 1995.

Replacement Needs and Total Openings

Most new openings in an occupation arise from the need to replace workers who have left the occupation. Such openings arise as workers leave one occupation to pursue another, become unemployed, or leave the labor force altogether through retirement or return to school, housekeeping, or other pursuits. Overall, about three out of every four new job openings in the state's economy will be created by the need to replace workers in existing jobs.

As Table 8 indicates, most new openings in Wisconsin due to labor force separations over the next ten years will be found in the **production, operative, and maintenance** occupations (26%), the **service** occupations (21%), the **professional, paraprofessional, and technical** occupations (15%), and the **clerical and administrative support** occupations (15%). Labor force separations in each

TABLE 9

OCCUPATIONS WITH THE MOST PROJECTED YEARLY JOB OPENINGS
IN WISCONSIN, 1985 THROUGH 1995

OCCUPATION		OCCUPATION TITLE	PROJECTED	PROJECTED	PROJECTED
RANK	CODE		ANNUAL JOB GROWTH	ANNUAL SEPARATIONS	TOTAL ANNUAL JOB OPENINGS
1	49011261	SALESPERSONS, RETAIL	804	3263	4067
2	67005376	JANITORS AND CLEANERS, EXC. MAIDS	583	3146	3729
3	19005016	GENERAL MANAGERS AND TOP EXEC.	668	2292	2960
4	55347357	GENERAL OFFICE CLERKS	270	1737	2007
5	49023254	CASHIERS (1)	962	992	1954
6	55338305	BOOKKEEPING & ACCOUNTING CLERKS	243	1615	1858
7	65005381	BARTENDERS	541	1283	1824
8	66008401	NURSING AIDES AND ORDERLIES	539	1266	1805
9	32502160	REGISTERED NURSES (1)	867	762	1629
10	65008392	WAITERS AND WAITRESSES	730	609	1339
11	49021263	STOCK CLERKS, SALES FLOOR	173	1054	1227
12	65038390	FOOD PREPARATION WORKERS	306	895	1201
13	49008269	SALES REPS. EXC. SCIENTIF & RETAIL	281	901	1182
14	67002377	MAIDS AND HOUSEKEEPING CLEANERS	205	873	1078
15	85132585	MAINTENANCE REPAIRERS, GEN. UTIL.	270	734	1004
16	31305114	TEACHERS, ELEMENTARY	242	703	945
17	97102843	TRUCK DRIVERS, HEAVY	217	711	928
18	63047453	GUARDS AND WATCH GUARDS	102	771	873
19	21114025	ACCOUNTANTS AND AUDITORS (1)	346	438	784
20	31308117	TEACHERS, SECONDARY SCHOOL	182	601	783
21	79014474	GARDENERS AND GROUNDSKEEPERS	127	574	701
22	65026384	COOKS, RESTAURANT	213	471	684
23	97105842	TRUCK DRIVERS, LIGHT	194	480	674
24	81008502	FIRST LINE SUPERV.: PRODUCTION	103	564	667
25	51002369	FIRST LINE SUPERVISORS, CLERICAL	189	428	617
26	98902905	HAND PACKERS AND PACKAGERS	150	467	617
27	41002268	FIRST LINE SUPERVISORS, SALES	148	440	588
28	87102512	CARPENTERS	111	465	576
29	65041389	COMB. FOOD PREPARATION, SERVICE	114	442	556
30	13002015	FINANCIAL MANAGERS	179	365	544
31	65032387	COOKS, SPECIALTY FAST FOOD	120	408	528
32	97111838	BUS DRIVERS, SCHOOL	94	431	525
33	32102159	PHYSICIANS AND SURGEONS	115	399	514
34	27505101	DIRECTORS, RELIG. ACTIV./EDUC. (1)	92	410	503
35	68005412	HAIRDRESSERS AND COSMETOLOGISTS	226	274	500

TABLE 10

OCCUPATIONS WITH THE GREATEST PROJECTED PERCENTAGE INCREASE
IN EMPLOYMENT IN WISCONSIN, 1985 THROUGH 1995

RANK	OCCUPATION		PROJECTED PERCENT INCREASE IN NUMBER OF JOBS 1985-95	ANNUAL AVERAGE EMPLOYMENT 1985	PROJECTED ANNUAL JOB GROWTH	PROJECTED ANNUAL SEPARATIONS	PROJECTED TOTAL ANNUAL JOB OPENINGS
	CODE	OCCUPATION TITLE					
1	28305235	PARALEGAL PERSONNEL	48%	690	33	43	76
2	25313084	ACTUARIES	43%	264	11	1	12
3	22126055	ELECTRICAL & ELECTRONIC ENGINEER	35%	3451	120	91	211
4	66005399	MEDICAL ASSISTANTS	35%	2232	77	55	132
5	25102076	COMPUTER SYSTEMS ANALYSTS, EDP	34%	4210	141	19	160
0	24511221	PETROLEUM TECHNICIANS & TECHNOL.	33%	3	0	0	0
6	32502160	REGISTERED NURSES (1)	31%	27566	867	762	1629
7	56021356	DATA ENTRY KEYERS, COMPOSING	30%	591	18	7	25
8	22505213	ELECTRICAL & ELECTRONIC TECHNS.	30%	3455	104	43	147
9	85705568	DATA PROCESSING EQUIP. REPAIRERS	30%	612	18	4	22
10	32911202	MEDICAL RECORDS TECHN.& TECHNOL.	29%	1002	30	28	58
11	32926195	ELECTROCARDIOGRAPH TECHNICIANS	29%	267	8	5	13
12	32923196	ELECTROENCEPHALOGRAPH TECHN.	27%	104	3	2	5
13	32114169	VETERINARIANS, VET. INSPECTORS	27%	325	9	16	25
14	68021421	USHERS, LOBBY ATT., TICKET TAKER	26%	556	15	8	23
15	32305162	OCCUPATIONAL THERAPISTS	26%	598	16	13	29
16	34035171	ARTISTS AND COMMERCIAL ARTISTS	26%	1091	29	36	65
17	32308163	PHYSICAL THERAPISTS	26%	974	25	12	37
18	32928207	SURGICAL TECHNICIANS	26%	914	24	16	40
19	49023254	CASHIERS (1)	25%	37770	962	992	1954
20	27505101	DIRECTORS, RELIG. ACT./EDUC. (1)	25%	3649	93	410	503
21	34008183	PUBLIC RELATIONS SPECIALISTS	25%	1743	44	68	112
22	32302165	RESPIRATORY THERAPISTS	25%	883	22	4	26
23	24311081	MEDICAL SCIENTISTS	25%	160	4	1	5
0	95014824	PETROLEUM REFINERY OPERATORS	25%	8	0	0	0
0	87921551	ROUSTABOUTS	25%	4	0	0	0
24	91505689	COMBINATION MACH.TOOL SET/OP,M/P	25%	1666	41	36	77
25	63017430	CORRECTION OFFICERS AND JAILERS	24%	2419	59	53	112
26	21114025	ACCOUNTANTS AND AUDITORS	24%	14238	346	438	784
27	28108110	LAWYERS	24%	4748	113	308	421
28	32108155	OPTOMETRISTS	23%	418	1	35	45
29	89921675	DENTAL LABORATORY TECHNICIANS	23%	1137	26	32	58
30	91508688	COMBINATION MACH.TOOL OPER., M/P	23%	946	22	21	43
31	91502686	NUMERICAL CONTROL MACH.TOOL, M/P	23%	2007	46	61	107
32	79017473	ANIMAL CARETAKERS, EXCEPT FARM	22%	648	15	14	29
33	22135057	MECHANICAL ENGINEERS	22%	4758	107	176	283
34	53117353	CREDIT CHECKERS	22%	525	12	16	28
35	53908334	ADVERTISING CLERKS	22%	130	3	5	8

of these categories will account for annual average openings of more than 10,000 jobs. Because the number of openings due to labor force separations is so much greater than the number of openings due to employment growth, the overall distribution of total openings by occupation group is much the same. The bulk of the total openings in the labor force are expected to be in the **service** occupations (22%), the **production, operative, and maintenance** occupations (20%), and the **professional, paraprofessional, and technical** occupations (18%).

There is, of course, much variation in the numbers of openings which will be available in specific occupations within these major occupational groups. Table 10 depicts the individual occupations with total annual openings of 500 or more. These 35 occupations constitute 5 percent of the 723 individual occupations included in the state's occupational projections. They are, however, expected to provide nearly half of the annual job openings in the state.

Both **sales, service, and clerical** occupations tend to be over-represented on this list relative to their numbers in the overall distribution of job categories in the state. Higher than average growth in **Retail Trade**, minimal training requirements, and high turnover are expected to result in about 9,000 openings annually for **salespersons, cashiers, bartenders, and waiters and waitresses**.

Similarly, higher than average growth in **Service** industries, especially health and **building services**, minimal training requirements, and high turnover are expected to result in about 7,000 openings annually for **janitors, nurses, and nursing aides and orderlies**.

Although clerical and managerial occupations are found in all industries, stronger than average growth in the **Finance, Insurance and Real Estate** industry is expected to contribute to a large number of openings for **general management** occupations, **general office clerks**, and **bookkeeping and accounting clerks**. Together, these three occupations will account for about 6,600 openings annually.

Employment Loss

Although employment in most occupations in the state is expected to increase, the number of jobs available in about six percent of the job categories is expected to decline by more than ten. This would represent an overall loss of about 6,700 jobs in these 49 occupations between 1985 and 1995. Although most of the categories expected to experience job losses are in the **production, operative, and maintenance** occupations, some clerical occupations such as **stenographers, data entry keyers, payroll and timekeeping clerks, file clerks, and stock clerks** are also likely to be hard hit. Technology change, particularly the adoption of production and office automation technology, is expected to alter the kinds of skills needed in the workplace. Other factors which influence the decline in employment include import competition, demographic changes, and changes in consumer tastes. Thus, while we expect some kinds of production and clerical occupations to decline, other, more skilled occupations within these groups will be growing as described above.

TABLE 11

OCCUPATIONS WITH THE GREATEST PROJECTED DECLINE
IN NEW EMPLOYMENT IN WISCONSIN, 1985 THROUGH 1995

RANK	OCCUPATION CODE	OCCUPATION TITLE	ANNUAL AVERAGE EMPLOYMENT	PROJECTED ANNUAL JOB GROWTH	PROJECTED ANNUAL SEPARATIONS	PROJECTED TOTAL ANNUAL JOB OPENINGS
			- 1985			
1	97947867	INDUSTRIAL TRUCK & TRACTOR OPER.	12034	-123	186	63
2	55302346	STENOGRAPHERS	2687	-105	98	-7
3	56017355	DATA ENTRY KEYERS, EX. COMPOSING	7408	-103	73	-29
4	92717748	SEWING MACH. OPERATOR, GARMENT	3759	-35	182	147
5	55341306	PAYROLL AND TIMEKEEPING CLERKS	3833	-28	123	95
6	55321336	FILE CLERKS	4381	-25	109	84
7	85723570	ELECTRICAL POWERLINE INSTAL/RPR.	2219	-22	32	10
8	58023327	STOCK CLERKS:STOCKROOM OR WAREH.	12931	-20	384	364
9	91117697	MACHINE TOOL CUTTING OPER., M/P	6160	-20	144	125
10	91321696	MACHINE FORMING OPERATORS, M/P	5243	-19	108	90
11	92723750	SHOE SEWING MACHINE OPERATOR	713	-17	24	7
12	93935799	CANNERY WORKERS	2662	-16	108	93
13	92705753	TEXTILE MACHINE OPERATORS	628	-12	12	0
14	91114694	GRINDING,BUFFING MACH.SET/OP.M/P	3011	-12	82	70
15	91302700	PUNCHING MACH. SETTER/OPER., M/P	2466	-10	60	50
16	31117137	GRADUATE ASSISTANTS, TEACHING	2930	-9	97	88
17	92923772	FURNACE, KILN, OVEN,KETTLE OPER.	332	-8	7	-1
18	92721749	SEWING MACH. OPER., NON-GARMENT	1777	-7	88	81
19	85726574	TELEPH. STATION INSTALL.& REPAIR	373	-7	5	-2
20	55328362	STATISTICAL CLERKS	583	-7	16	9
21	91305699	PRESS, BRAKE MACH.SETTER/OP.,M/P	2455	-6	61	55
22	58026324	ORDER FILLERS, SALES	3193	-6	95	89
23	91105695	LATHE,TURNING MACH.SETTER/OP,M/P	3778	-5	78	73
24	91108691	DRILLING,BORING MACH.SET/OP.,M/P	2211	-4	46	42
25	92947776	PAINTERS, TRANSPORTATION EQUIP.	522	-4	11	7
26	89511655	SHOE AND LEATHER WORKERS	619	-4	45	41
27	92941786	CUTTING AND SLICING SETTER/OPER.	451	-3	12	9
28	93928809	PORTABLE MACHINE CUTTERS	217	-3	4	1
29	85112580	MACHINERY MECHANICS:TEXTILE MACH	136	-3	3	0
30	89802629	SLAUGHTERERS AND BUTCHERS	1110	-2	47	45
31	28302234	LAW CLERKS	467	-2	23	21
32	67008378	PEST CONTROLLERS AND ASSISTANTS	182	-2	11	9
33	56005298	DUPLICATING MACHINE OPERATORS	382	-2	4	2
34	93923811	SEWERS, HAND	151	-2	8	6
35	91314701	ROLLING MACHINE SETTER/OPER.,M/P	234	-2	5	3
36	91311692	EXTRUDING MACH. SETTER/OPER.,M/P	399	-2	6	4
37	21914039	TAX EXAMINER,COLLECTOR,REV.AGENT	972	-2	32	30
38	91111698	MILLING,PLANING MACH.SET/OP.,M/P	1009	-2	16	14
39	92702754	TEXTILE MACHINE SETTER/OPERATOR	90	-2	2	0
40	57105290	DIRECTORY ASSISTANCE OPERATORS	392	-2	12	10
41	89502654	PATTERNMAKERS AND LAYOUT WORKERS	135	-2	2	1
42	91308703	SHEAR, SLITTER MACH. SET/OP.,M/P	800	-1	20	19
43	21502032	CLAIMS TAKERS, UNEMPLOY.BENEFITS	139	-1	3	2
44	85113579	MACHINERY MECHANICS: SEWING MACH	90	-1	2	1
45	57108289	CENTRAL OFFICE OPERATORS	120	-1	4	3

High Technology Occupational Growth

The transformation of the U.S. economy in the post-World War II period from an industrial to a post-industrial base has focused attention on the critical role of the development of new advanced technologies in the manufacturing and service sectors of the economy. These new technologies will provide increasing employment opportunities to replace jobs which continue to be lost in heavy manufacturing. More importantly, they will not only provide new products for final demand (e.g., personal computers, food processors, and electronic banking and shopping services), but also provide products which will alter the nature of production processes throughout the economy (e.g., industrial robotics, fiber optics, biotechnology). Thus, through the development of new products and increased productivity, industrial innovations and technical changes will continue to serve as the foundation of long-term postindustrial economic progress in the U.S. Moreover, these emerging technologies will affect labor force demand, altering both the kinds of jobs which are available within the U.S. and the skills which these jobs will require.

The economic restructuring of the labor force occurring at the national level as the U.S. economy has adopted new technologies, has been paralleled by similar shifts in the kinds of skills and jobs demanded at the state and local levels. Knowing which kinds of skills will be in demand and for what kinds of jobs workers will be needed in which areas is, of course, crucial to those charged with allocating scarce resources for job training and counseling programs.

Our definitions of high technology industries and occupations are those developed by the analysts of the U.S. Bureau of Labor Statistics (BLS) for an article in the November 1983 issue of the *Monthly Labor Review*. Of the three definitions of high technology industries developed by the BLS, the most commonly used one includes all manufacturing industries with a proportion of technologically-oriented workers equal to or greater than the average for all manufacturing industries and a ratio of research and development expenditures to sales close to or above the average for all industries. Two industries which provide technical support to high technology manufacturing are also included.

Table 12 gives the annual average employment in the 25 high technology industries found in Wisconsin. Together, these 25 industries employed about 101,470 workers or five percent of the state's work force in 1985. Total employment in these industries in the state is expected to rise to 11,230 by 1995. Although the overall rate of employment growth in this group of industries is expected to be slightly less than that for all industries in the state, the manufacturing portion of the group will continue to expand at about twice the rate of overall manufacturing growth. Moreover, employment growth in high technology manufacturing will account for about 32 percent of the overall growth in manufacturing employment in the state between 1985 and 1995.

This growth will not be evenly distributed across all the high technology industries in the state. Employment growth in three high technology manufacturing industries, **engines and turbines**, **special industry machinery**, and **electrical industrial apparatus**, will provide more than one half of the new jobs in high technology manufacturing. Growth in the **computer and data processing services** industry will also be a major contributor to new high technology employment in the state and provide about 14 percent of the new employment in the service industry.

TABLE 12

WISCONSIN EMPLOYMENT IN HIGH TECHNOLOGY INDUSTRIES
PROJECTIONS FROM 1985 TO 1995

STANDARD INDUSTRIAL CODE	INDUSTRIAL TITLE	ANNUAL AVERAGE EMPLOYMENT	PROJECTED ANNUAL AVERAGE EMPLOYMENT	CHANGE IN EMPLOYMENT	PERCENTAGE CHANGE IN EMPLOYMENT
		1985	1995	1985-95	1985-95
3480	ORDNANCE & ACCESS., EX VEH. & GUIDED MISS.	1,110	1,230	120	10.8%
3510	ENGINES AND TURBINES	18,850	21,140	2,290	12.1%
3550	SPECIAL INDUSTRY MACHINERY	12,660	14,200	1,540	12.1%
3570	OFFICE, COMPUTING MACHINERY	2,970	3,340	370	12.4%
3610	ELECTRIC DISTRIBUTING EQUIPMENT	5,930	6,480	550	9.2%
3620	ELECTRICAL INDUSTRIAL APPARATUS	17,380	19,010	1,630	9.3%
3650	RADIO AND TV RECEIVING EQUIPMENT	630	690	60	9.5%
3660	COMMUNICATION EQUIPMENT	3,510	3,830	320	9.1%
3670	ELECTRONIC COMPONENTS AND ACCESORIES	4,470	4,890	420	9.3%
3690	MISC. ELECTRICAL EQUIPMENT AND SUPPLIES	10,550	11,540	990	9.3%
3720	AIRCRAFT AND PARTS	320	330	10	3.1%
3810	ENGINEERING AND SCIENTIFIC INSTRUMENTS	2,810	3,270	460	16.3%
3840	MEDICAL INSTRUMENTS AND SUPPLIES	2,290	2,670	380	16.5%
3860	PHOTOGRAPHIC EQUIPMENT & SUPPLIES	990	1,150	160	16.1%
2810	INDUSTRIAL INORGANIC CHEMICALS	410	410	0	0.0%
2820	PLASTICS MATERIALS AND SYNTHETICS	750	760	10	1.3%
2830	DRUGS	790	800	10	1.2%
2840	SOAP, CLEANERS, AND TOILET GOODS	4,000	4,040	40	1.0%
2850	PAINTS AND ALLIED PRODUCTS	1,160	1,170	10	0.8%
2860	INDUSTRIAL ORGANIC CHEMICALS	650	660	10	1.5%
2870	AGRICULTURAL CHEMICALS	600	600	0	0.0%
2890	MISCELLANEOUS CHEMICAL PRODUCTS	1,650	1,660	10	0.6%
2910	PETROLEUM REFINING	140	170	30	21.4%
7370	COMPUTER AND DATA PROCESSING SERVICES	6,090	7,350	1,260	20.6%
7391	RESEARCH AND DEVELOPMENT LABORATORIES	760	910	150	19.7%

Table 13 presents average annual employment for 1985 in the engineering, technical, and scientific occupations used to identify high technology industries in the state. This table also indicates the expected employment growth in the state to 1995 for these technologically-intensive occupations. These occupations are expected to add about 8,700 new jobs in Wisconsin between 1985 and 1995. Overall, the rate of growth in these occupations is expected to be about one and one half times that of state's total work force. Employment in these occupations is expected to increase by about 20 percent over the ten years while the overall work force will grow by about 12 percent over the same time period.

As with industry growth, a few technologically-intensive occupations will be responsible for much of the expected employment growth. These include **electrical and electronic engineers, mechanical engineers, electrical and electronic technicians, computer systems analysts, drafters, and computer programmers**. These six occupations are expected to add 6,450 new jobs in the state between 1985 and 1995. About three out of every four new technologically-intensive jobs in Wisconsin will fall in one of these six categories.

TABLE 13

WISCONSIN OCCUPATIONAL GROWTH PROJECTIONS
EMPLOYMENT IN HIGH TECHNOLOGY OCCUPATIONS
1985 PROJECTED TO 1995

OCCUPATION CODE	OCCUPATION TITLE	BASE YEAR 1985		PROJECTED YEAR 1995			
		ANNUAL AVERAGE EMPLOYMENT	PERCENT OF TOTAL EMPLOYMENT	ANNUAL AVERAGE EMPLOYMENT	PERCENT OF TOTAL EMPLOYMENT	CHANGE IN EMPLOYMENT 1985-95	PERCENTAGE CHANGE 1985-95
22105058	METALLURGISTS AND REL. ENGINEERS	220	0.01	260	0.01	40	18.1%
22108059	MINING ENGINEERS, INC. SAFETY	20	0.00	20	0.00	0	0.0%
22114053	CHEMICAL ENGINEERS	370	0.01	420	0.01	50	13.5%
22117060	NUCLEAR ENGINEERS	60	0.00	60	0.00	0	0.0%
22121054	CIVIL ENGINEERS, INCL. TRAFFIC	2,370	0.11	2,670	0.12	300	12.6%
22123065	AGRICULTURAL ENGINEERS	110	0.00	120	0.00	10	9.0%
22126055	ELECTRICAL & ELECTRONIC ENGINEER	3,450	0.17	4,650	0.21	1,200	34.7%
22128056	INDUSTRIAL ENGINEERS, EXC. SAFETY	2,370	0.11	2,850	0.12	480	20.2%
22135057	MECHANICAL ENGINEERS	4,760	0.24	5,820	0.26	1,060	22.2%
22138067	MARINE ENGINEERS	60	0.00	70	0.00	10	16.6%
22311073	SURVEYING AND MAPPING SCIENTISTS	470	0.02	540	0.02	70	14.8%
22502212	CIVIL ENGINEERING TECHNICIANS	1,590	0.08	1,740	0.07	150	9.4%
22505213	ELECTRICAL & ELECTRONIC TECHNS.	3,460	0.17	4,490	0.20	1,030	29.7%
22508214	INDUSTRIAL ENGINEERING TECHN.	470	0.02	560	0.02	90	19.1%
22511215	MECHANICAL ENGINEERING TECHN.	580	0.02	710	0.03	130	22.4%
22514218	DRAFTERS	6,720	0.33	7,510	0.33	790	11.7%
22517219	ESTIMATORS & DRAFTERS, UTILITIES	130	0.00	140	0.00	10	7.6%
22521074	SURVEYING AND MAPPING TECHNICIAN	850	0.04	980	0.04	130	15.2%
24102091	PHYSICISTS AND ASTRONOMERS	40	0.00	40	0.00	0	0.0%
24105088	CHEMISTS	1,150	0.05	1,230	0.05	80	6.9%
24108090	METEOROLOGISTS	20	0.00	20	0.00	0	0.0%
24111089	GEOLOGIST, GEOPHYSICIST, OCEANOGR	60	0.00	70	0.00	10	16.6%
24302080	FORESTER, CONSERVATION SCIENTIST	640	0.03	680	0.03	40	6.2%
24305078	AGRICULTURAL AND FOOD SCIENTISTS	480	0.02	560	0.02	80	16.6%
24308079	BIOLOGICAL SCIENTISTS	460	0.02	500	0.02	40	8.6%
24311081	MEDICAL SCIENTISTS	160	0.00	200	0.00	40	25.0%
24502223	BIOLOGICAL, AGRIC., FOOD TECHN.	400	0.02	420	0.01	20	5.0%
24505224	CHEMICAL TECHNICIANS, EXC. HEALTH	980	0.04	1,030	0.04	50	5.1%
25102076	COMPUTER SYSTEMS ANALYSTS, EDP	4,210	0.21	5,620	0.25	1,410	33.4%
25105232	COMPUTER PROGRAMMERS	6,050	0.30	7,010	0.31	960	15.8%
25108231	COMPUTER PROGRAMMER AIDES	1,360	0.06	1,530	0.06	170	12.5%
25111240	PROGRAMMERS: NUMERICAL, TOOL	260	0.01	310	0.01	50	19.2%
25302252	OPERATIONS AND SYSTEMS ANALYSTS	380	0.01	440	0.01	60	15.7%
25312085	STATISTICIANS	120	0.00	130	0.00	10	8.3%
25313084	ACTUARIES	260	0.01	380	0.01	120	46.1%
25323225	MATHEMATICAL TECHNICIANS	120	0.00	130	0.00	10	8.3%
39005246	TRAFFIC TECHNICIANS	20	0.00	20	0.00	0	0.0%

3.B. OCCUPATIONALLY SPECIFIC EMPLOYMENT PROJECTIONS FOR WISCONSIN

This section presents detailed data on base year nonfarm wage and salary employment and projected employment opportunities in 1995 for nearly 700 occupations in Wisconsin. Table 14 describes projected employment growth between 1985 and 1995 by occupation. Table 15 describes total projected openings in 1995 by occupation. This table also indicates the number of expected openings due to employment growth and to replacement needs. Information about specific occupations in these tables is arranged by major occupational groups and subgroups. An alphabetical listing of occupational titles and their related codes are provided in Appendix A to assist the reader in locating information for specific occupations in Tables 14 and 15

TABLE 14

WISCONSIN OCCUPATIONAL GROWTH PROJECTIONS
EMPLOYMENT BY OCCUPATION, 1985 PROJECTED TO 1995

OCCUPATION CODE	OCCUPATION TITLE	BASE YEAR 1985		PROJECTED YEAR 1995			
		ANNUAL AVERAGE EMPLOYMENT	PERCENT OF TOTAL EMPLOYMENT	ANNUAL AVERAGE EMPLOYMENT	PERCENT OF TOTAL EMPLOYMENT	CHANGE IN EMPLOYMENT 1985-95	PERCENTAGE CHANGE 1985-95
00000000	TOTAL, ALL OCCUPATIONS	1,978,580	100.00	2,212,190	100.00	233,610	11.8%
10000001	MANAGERIAL AND MGT, RELATED OCC.	125,410	6.33	142,380	6.43	16,970	13.5%
11000002	MANAGERIAL & ADMINISTRATIVE OCC.	125,410	6.33	142,380	6.43	16,970	13.5%
13002015	FINANCIAL MANAGERS	11,870	0.59	13,660	0.61	1,790	15.0%
13005021	PERSONNEL, TRAINING, LABOR REL. MGR	2,580	0.13	2,890	0.13	310	12.0%
13008023	PURCHASING MANAGERS	5,350	0.27	6,090	0.27	740	13.8%
13011018	MARKETING, ADV., PUBLIC REL. MGRS	6,200	0.31	6,980	0.31	780	12.5%
13014010	ADMINISTRATIVE SERVICES MANAGER	2,540	0.12	2,860	0.12	320	12.5%
13017014	ENGLISH, MATH., NAT. SCI. MGR.	1,170	0.05	1,270	0.05	100	8.5%
15002007	POSTMASTERS, MAIL SUPERINTENDENT	970	0.04	1,110	0.05	140	14.4%
15005013	EDUCATION ADMINISTRATORS	4,170	0.21	4,570	0.20	400	9.5%
15008019	MEDICINE AND HEALTH SERV. MGRS	2,070	0.10	2,450	0.11	380	18.3%
15011022	PROPERTY, REAL ESTATE MANAGEMENT	260	0.01	300	0.01	40	15.3%
15014017	INDUSTRIAL PRODUCTION MANAGERS	3,140	0.15	3,320	0.15	180	5.7%
15017012	CONSTRUCTION MANAGERS	2,550	0.12	2,780	0.12	230	9.0%
15021020	MINING AND RELATED MANAGERS	120	0.00	110	0.00	-10	-8.3%
15023011	COMMUNICATION, TRANSP., UTIL. MGRS	2,710	0.13	2,920	0.13	210	7.7%
15026006	FOOD SERVICE & LODGING MANAGERS	5,240	0.26	5,960	0.26	720	13.7%
19002008	PUBLIC ADMIN., LEG., GEN. ADMIN.	5,350	0.27	5,830	0.26	480	8.9%
19005016	GENERAL MANAGERS AND TOP EXEC.	52,160	2.63	58,830	2.65	6,670	12.7%
19999009	ALL OTHER MANAGERS & ADMINIST.	17,000	0.85	20,450	0.92	3,450	20.2%
20000000	PROFESSIONAL, PARAPROFESS., TECH.	366,400	18.51	423,620	19.14	57,220	15.6%
21000024	MANAGEMENT SUPPORT OCCUPATIONS	21,630	1.09	26,160	1.18	4,530	20.9%
21102041	UNDERWRITERS	1,980	0.10	2,330	0.10	350	17.6%
21105044	CREDIT ANALYSTS	980	0.04	1,150	0.05	170	17.3%
21108046	LOAN OFFICERS AND COUNSELORS	1,770	0.08	2,060	0.09	290	16.3%
21111040	TAX PREPARERS	420	0.02	430	0.01	10	2.3%
21114025	ACCOUNTANTS AND AUDITORS	14,240	0.71	17,700	0.80	3,460	24.2%
21117043	BUDGET ANALYSTS	940	0.04	1,020	0.04	80	8.5%
21199049	ALL OTHER FINANCIAL SPECIALISTS	1,300	0.06	1,460	0.06	160	12.3%
21300000	PURCHASING AGENTS AND BUYERS	7,550	0.38	8,410	0.38	860	11.3%
21302038	WHOLESALE, RETAIL BUYERS, EX. FARM	4,160	0.21	4,600	0.20	440	10.5%
21305048	PURCHASING AGENTS & BUYERS, FARM	550	0.02	620	0.02	70	12.7%
21308037	PURCHASING AGENT EX. WHO/RET/FARM	2,830	0.14	3,200	0.14	370	13.0%
21500000	PERSONNEL SPECIALISTS & RELATED	6,620	0.33	7,240	0.32	620	9.3%
21502032	CLAIMS TAKERS, UNEMPLOY. BENEFITS	140	0.00	130	0.00	-10	-7.1%
21505035	SPECIAL AGENTS, INSURANCE	390	0.01	460	0.02	70	17.9%
21508033	EMPLOYMENT INTERVIEWERS	3,190	0.16	3,330	0.15	140	4.3%
21511034	PERSONNEL, TRAIN., LABOR REL. SPEC	2,900	0.14	3,330	0.15	430	14.8%
21900000	OTHER MANAGEMENT SUPPORT OCC.	12,520	0.63	14,200	0.64	1,680	13.4%
21902030	COST ESTIMATORS	2,800	0.14	3,150	0.14	350	12.5%
21905047	MANAGEMENT ANALYSTS	160	0.00	190	0.00	30	18.7%

TABLE 14

WISCONSIN OCCUPATIONAL GROWTH PROJECTIONS
EMPLOYMENT BY OCCUPATION, 1985 PROJECTED TO 1995
(Continued)

OCCUPATION CODE	OCCUPATION TITLE	BASE YEAR 1985		PROJECTED YEAR 1995			
		ANNUAL AVERAGE EMPLOYMENT	PERCENT OF TOTAL EMPLOYMENT	ANNUAL AVERAGE EMPLOYMENT	PERCENT OF TOTAL EMPLOYMENT	CHANGE IN EMPLOYMENT 1985-95	PERCENTAGE CHANGE 1985-95
21908029	CONSTRUCTION, BUILDING INSPECTOR	720	0.03	800	0.03	80	11.1%
21911028	COMPLIANCE & ENFORCE. INSPECTORS	1,630	0.08	1,720	0.07	90	5.5%
21914039	TAX EXAMINER, COLLECTOR, REV. AGENT	970	0.04	950	0.04	-20	-2.0%
21917026	ASSESSORS	1,180	0.05	1,280	0.05	100	8.4%
21921027	CLAIMS EXAMINERS, INSURANCE	350	0.01	420	0.01	70	20.0%
21999042	ALL OTHER MANAGEMENT SUPPORT OCC	4,700	0.23	5,690	0.25	990	21.0%
22000050	ENGINEERS, ARCHITECTS, SURVEYORS	35,260	1.78	42,190	1.90	6,930	19.6%
22100051	ENGINEERS	16,350	0.82	20,020	0.90	3,670	22.4%
22102052	AERONAUTICAL & ASTRO. ENGINEERS	*	***	*	***	*	***
22105058	METALLURGISTS AND REL. ENGINEERS	220	0.01	260	0.01	40	18.1%
22108059	MINING ENGINEERS, INC. SAFETY	20	0.00	20	0.00	0	0.0%
22114053	CHEMICAL ENGINEERS	370	0.01	420	0.01	50	13.5%
22117060	NUCLEAR ENGINEERS	60	0.00	60	0.00	0	0.0%
22121054	CIVIL ENGINEERS, INCL. TRAFFIC	2,370	0.11	2,670	0.12	300	12.6%
22123065	AGRICULTURAL ENGINEERS	110	0.00	120	0.00	10	9.0%
22126055	ELECTRICAL & ELECTRONIC ENGINEER	3,450	0.17	4,650	0.21	1,200	34.7%
22128056	INDUSTRIAL ENGINEERS, EXC. SAFETY	2,370	0.11	2,850	0.12	480	20.2%
22132063	SAFETY ENGINEERS, EXCEPT MINING	280	0.01	330	0.01	50	17.8%
22135057	MECHANICAL ENGINEERS	4,760	0.24	5,820	0.26	1,060	22.2%
22138067	MARINE ENGINEERS	60	0.00	70	0.00	10	16.6%
22199064	ALL OTHER ENGINEERS	2,280	0.11	2,740	0.12	460	20.1%
22300000	ARCHITECTS AND SURVEYORS	1,450	0.07	1,700	0.07	250	17.2%
22301069	ARCHITECTS, INCL. LANDSCAPE ARCH	140	0.00	160	0.00	20	14.2%
22302070	ARCHITECTS, EXC. LAND. & MARINE	790	0.03	930	0.04	140	17.7%
22305066	MARINE ARCHITECTS	20	0.00	20	0.00	0	0.0%
22308071	LANDSCAPE ARCHITECTS	40	0.00	50	0.00	10	25.0%
22311073	SURVEYING AND MAPPING SCIENTISTS	470	0.02	540	0.02	70	14.8%
22500211	ENGINEERING TECHNICIANS	17,460	0.88	20,470	0.92	3,010	17.2%
22502212	CIVIL ENGINEERING TECHNICIANS	1,590	0.08	1,740	0.07	150	9.4%
22505213	ELECTRICAL & ELECTRONIC TECHNS.	3,460	0.17	4,490	0.20	1,030	29.7%
22508214	INDUSTRIAL ENGINEERING TECHN.	470	0.02	560	0.02	90	19.1%
22511215	MECHANICAL ENGINEERING TECHN.	580	0.02	710	0.03	130	22.4%
22514218	DRAFTERS	6,720	0.33	7,510	0.33	790	11.7%
22517219	ESTIMATORS & DRAFTERS, UTILITIES	130	0.00	140	0.00	10	7.6%
22521074	SURVEYING AND MAPPING TECHNICIAN	850	0.04	980	0.04	130	15.2%
22599216	ALL OTHER ENGINEERING TECHN.	3,660	0.18	4,350	0.19	690	18.8%
24000075	NATURAL, COMPUTER, MATH SCIENTISTS	8,830	0.44	9,740	0.44	910	10.3%
24100087	PHYSICAL SCIENTISTS	2,400	0.12	2,630	0.11	230	9.5%
24102091	PHYSICISTS AND ASTRONOMERS	40	0.00	40	0.00	0	0.0%
24105088	CHEMISTS	1,150	0.05	1,230	0.05	80	6.9%
24108090	METEOROLOGISTS	20	0.00	20	0.00	0	0.0%
24111089	GEOLOGIST, GEOPHYSICIST, OCEANOGR	60	0.00	70	0.00	10	16.6%

TABLE 14

WISCONSIN OCCUPATIONAL GROWTH PROJECTIONS
EMPLOYMENT BY OCCUPATION, 1985 PROJECTED TO 1995
(Continued)

OCCUPATION CODE	OCCUPATION TITLE	BASE YEAR 1985		PROJECTED YEAR 1995			
		ANNUAL AVERAGE EMPLOYMENT	PERCENT OF TOTAL EMPLOYMENT	ANNUAL AVERAGE EMPLOYMENT	PERCENT OF TOTAL EMPLOYMENT	CHANGE IN EMPLOYMENT 1985-95	PERCENTAGE CHANGE 1985-95
24199092	ALL OTHER PHYSICAL SCIENTISTS	1,130	0.05	1,270	0.05	140	12.3%
24300077	LIFE SCIENTISTS	3,890	0.19	4,280	0.19	390	10.0%
24302080	FORESTER, CONSERVATION SCIENTIST	640	0.03	680	0.03	40	6.2%
24305078	AGRICULTURAL AND FOOD SCIENTISTS	480	0.02	560	0.02	80	16.6%
24308079	BIOLOGICAL SCIENTISTS	460	0.02	500	0.02	40	8.6%
24311081	MEDICAL SCIENTISTS	160	0.00	200	0.00	40	25.0%
24399082	ALL OTHER LIFE SCIENTISTS	2,150	0.10	2,350	0.10	200	9.3%
24500220	PHYSICAL & LIFE SCI. TECHNICIANS	2,550	0.12	2,820	0.12	270	10.5%
24502223	BIOLOGICAL, AGRIC., FOOD TECHN.	400	0.02	420	0.01	20	5.0%
24505224	CHEMICAL TECHNICIANS, EXC.HEALTH	980	0.04	1,030	0.04	50	5.1%
24511221	PETROLEUM TECHNICIANS & TECHNOL.	0	0.00	0	0.00	0	***. %
24599222	ALL OTHER SCIENCE TECHNICIANS	1,160	0.05	1,370	0.06	210	18.1%
25000000	COMPUTER AND MATHEMATICAL OCC.	13,310	0.67	16,190	0.73	2,880	21.6%
25100000	COMPUTER AND RELATED OCCUPATIONS	11,870	0.59	14,470	0.65	2,600	21.9%
25102076	COMPUTER SYSTEMS ANALYSTS, EDP	4,210	0.21	5,620	0.25	1,410	33.4%
25105232	COMPUTER PROGRAMMERS	6,050	0.30	7,010	0.31	960	15.8%
25108231	COMPUTER PROGRAMMER AIDES	1,360	0.06	1,530	0.06	170	12.5%
25111240	PROGRAMMERS: NUMERICAL, TOOL	260	0.01	310	0.01	50	19.2%
25300000	MATHEMATICAL AND RELATED OCCUP.	1,440	0.07	1,720	0.07	280	19.4%
25302252	OPERATIONS AND SYSTEMS ANALYSTS	380	0.01	440	0.01	60	15.7%
25312085	STATISTICIANS	120	0.00	130	0.00	10	8.3%
25313084	ACTUARIES	260	0.01	380	0.01	120	46.1%
25315045	FINANCIAL ANALYSTS, STATISTICAL	310	0.01	360	0.01	50	16.1%
25319086	MATHEMATICIANS, ALL OTH.MATH.SCI	250	0.01	280	0.01	30	12.0%
25323225	MATHEMATICAL TECHNICIANS	120	0.00	130	0.00	10	8.3%
27100000	SOCIAL SCIENTISTS, RECR., RELIGION	19,410	0.98	22,640	1.02	3,230	16.6%
27100093	SOCIAL SCIENTISTS	2,310	0.11	2,550	0.11	240	10.3%
27102094	ECONOMISTS, MARKET ANALYSTS	230	0.01	250	0.01	20	8.6%
27105097	URBAN AND REGIONAL PLANNERS	330	0.01	340	0.01	10	3.0%
27108095	PSYCHOLOGISTS	1,370	0.06	1,550	0.07	180	13.1%
27199098	ALL OTHER SOCIAL SCIENTISTS	380	0.01	410	0.01	30	7.8%
27200099	SOCIAL, RECREATION, RELIGION OCC	17,100	0.86	20,090	0.90	2,990	17.4%
27302104	SOCIAL WORKER, MED.&PSYCHIATRIC	3,450	0.17	4,040	0.18	590	17.1%
27305105	SOCIAL WORKERS, EX. MED.& PSYCH.	4,100	0.20	4,600	0.20	500	12.1%
27308419	SOCIAL SERVICE TECHNICIANS	2,330	0.11	2,720	0.12	390	16.7%
27311102	RECREATION WORKERS	3,280	0.16	3,790	0.17	510	15.5%
27502100	CLERGY	260	0.01	310	0.01	50	19.2%
27505101	DIRECTORS, RELIGIOUS ACTIV./EDUC.	3,650	0.18	4,570	0.20	920	25.2%
27599248	ALL OTHER RELIGIOUS WORKERS	40	0.00	50	0.00	10	25.0%
28000000	LAW AND RELATED OCCUPATIONS	7,680	0.38	9,330	0.42	1,650	21.4%
28100100	LAWYERS AND JUDGES	5,300	0.26	6,460	0.29	1,160	21.8%
28102109	JUDGES AND MAGISTRATES	530	0.02	560	0.02	30	5.6%

TABLE 14

WISCONSIN OCCUPATIONAL GROWTH PROJECTIONS
 EMPLOYMENT BY OCCUPATION, 1985 PROJECTED TO 1995
 (Continued)

OCCUPATION CODE	OCCUPATION TITLE	BASE YEAR 1985		PROJECTED YEAR 1995			
		ANNUAL AVERAGE EMPLOYMENT	PERCENT OF TOTAL EMPLOYMENT	ANNUAL AVERAGE EMPLOYMENT	PERCENT OF TOTAL EMPLOYMENT	CHANGE IN EMPLOYMENT 1985-95	PERCENTAGE CHANGE 1985-95
28105108	ADJUDICATORS & HEARING OFFICERS	20	0.00	20	0.00	0	0.0%
28108110	LAWYERS	4,750	0.24	5,870	0.26	1,120	23.5%
28300233	LEGAL ASSISTANTS AND TECHNICIANS	2,390	0.12	2,870	0.12	480	20.0%
28302234	LAW CLERKS	470	0.02	440	0.01	-30	-6.3%
28305235	PARALEGAL PERSONNEL	690	0.03	1,020	0.04	330	47.8%
28308238	TITLE SEARCHERS	230	0.01	270	0.01	40	17.3%
28311237	TITLE EXAMINERS AND ABSTRACTORS	340	0.01	400	0.01	60	17.6%
28399239	ALL OTHER LEGAL ASSISTANTS	660	0.03	740	0.03	80	12.1%
31000111	TEACHERS, LIBRARIANS, COUNSELORS	118,690	5.99	129,910	5.87	11,220	9.4%
31100000	COLLEGE AND UNIVERSITY FACULTY	17,990	0.90	19,340	0.87	1,350	7.5%
31111122	LECTURERS	300	0.01	360	0.01	60	20.0%
31114143	NURSING INSTRUCTORS	920	0.04	1,040	0.04	120	13.0%
31117137	GRADUATE ASSISTANTS, TEACHING	2,930	0.14	2,840	0.12	-90	-3.0%
31202129	LIFE SCIENCE TEACHERS	1,700	0.08	1,860	0.08	160	9.4%
31204124	CHEMISTRY TEACHERS	380	0.01	420	0.01	40	10.5%
31206131	PHYSICS TEACHERS	250	0.01	270	0.01	20	8.0%
31209133	ALL OTHER PHYS. SCIENCE TEACHERS	140	0.00	150	0.00	10	7.1%
31210132	SOCIAL SCIENCE TEACHERS	1,670	0.08	1,830	0.08	160	9.5%
31212128	HEALTH SPECIALTIES TEACHERS	380	0.01	420	0.01	40	10.5%
31216127	ENGLISH & FOREIGN LANG. TEACHERS	1,270	0.06	1,390	0.06	120	9.4%
31218123	ART, DRAMA, AND MUSIC TEACHERS	1,230	0.06	1,340	0.06	110	8.9%
31222126	ENGINEERING TEACHERS	820	0.04	890	0.04	70	8.5%
31224130	MATHEMATICAL SCIENCE TEACHERS	790	0.03	870	0.03	80	10.1%
31226125	COMPUTER SCIENCE TEACHERS	280	0.01	310	0.01	30	10.7%
31299134	ALL OTHER POST SECONDARY TEACHER	4,920	0.24	5,370	0.24	450	9.1%
31300135	TEACHERS AND INSTRUCTORS	86,490	4.37	94,980	4.29	8,490	9.8%
31302113	TEACHERS, PRESCHOOL & KINDERGARTN	4,800	0.24	5,520	0.24	720	15.0%
31305114	TEACHERS, ELEMENTARY	26,360	1.33	28,770	1.30	2,410	9.1%
31308117	TEACHERS, SECONDARY SCHOOL	29,610	1.49	31,430	1.42	1,820	6.1%
31311144	TEACHERS, SPECIAL EDUCATION	7,060	0.35	7,710	0.34	650	9.2%
31314140	TEACHERS, VOCATIONAL EDUCATION	4,340	0.21	4,790	0.21	450	10.3%
31317138	INSTRUCTORS, ADULT NONVOC. EDUC.	3,990	0.20	4,870	0.22	880	22.0%
31321139	INSTRUCTORS AND COACHES, SPORTS	4,470	0.22	5,170	0.23	700	15.6%
31323136	FARM & HOME MANAGEMENT ADVISORS	650	0.03	650	0.02	0	0.0%
31399141	ALL OTHER TEACHERS, INSTRUCTORS	5,210	0.26	6,050	0.27	840	16.1%
31400145	LIBRARIANS, ARCHIVISTS, CURATORS	14,200	0.71	15,590	0.70	1,390	9.7%
31502148	LIBRARIANS, PROFESSIONAL	3,180	0.16	3,450	0.15	270	8.4%
31505242	TECHNICAL ASSISTANTS, LIBRARY	1,500	0.07	1,630	0.07	130	8.6%
31508146	AUDIO-VISUAL SPECIALISTS	230	0.01	250	0.01	20	8.6%
31511147	CURATORS, ARCHIVISTS, MUSEUM TECH	70	0.00	90	0.00	20	28.5%
31514149	COUNSELORS	2,150	0.10	2,450	0.11	300	13.9%
31517142	INSTRUCTIONAL COORDINATORS	830	0.04	920	0.04	90	10.8%

TABLE 14

WISCONSIN OCCUPATIONAL GROWTH PROJECTIONS
EMPLOYMENT BY OCCUPATION, 1985 PROJECTED TO 1995
(Continued)

OCCUPATION CODE	OCCUPATION TITLE	BASE YEAR 1985		PROJECTED YEAR 1995			
		ANNUAL AVERAGE EMPLOYMENT	PERCENT OF TOTAL EMPLOYMENT	ANNUAL AVERAGE EMPLOYMENT	PERCENT OF TOTAL EMPLOYMENT	CHANGE IN EMPLOYMENT 1985-95	PERCENTAGE CHANGE 1985-95
31521365	TEACHERS AIDES, PARAPROFESSIONAL	6,240	0.31	6,810	0.30	570	9.1%
32000209	HEALTH PRACTITIONERS, TECHNICIANS	80,500	4.06	97,750	4.41	17,250	21.4%
32100000	HEALTH TREATING PRACTITIONERS	9,260	0.46	10,920	0.49	1,660	17.9%
32102159	PHYSICIANS AND SURGEONS	6,470	0.32	7,620	0.34	1,150	17.7%
32105152	DENTISTS	1,670	0.08	2,000	0.09	330	19.7%
32108155	OPTOMETRISTS	420	0.02	520	0.02	100	23.8%
32111157	PODIATRISTS	100	0.00	100	0.00	0	0.0%
32114169	VETERINARIANS, VET. INSPECTORS	330	0.01	410	0.01	80	24.2%
32199151	CHIROPRACTORS	290	0.01	280	0.01	-10	-3.4%
32300161	THERAPISTS	5,150	0.26	6,010	0.27	860	16.6%
32302165	RESPIRATORY THERAPISTS	880	0.04	1,110	0.05	230	26.1%
32305162	OCCUPATIONAL THERAPISTS	600	0.03	750	0.03	150	25.0%
32308163	PHYSICAL THERAPISTS	970	0.04	1,230	0.05	260	26.8%
32311168	CORRECT. & MANUAL ARTS THERAPIST	40	0.00	40	0.00	0	0.0%
32314166	SPEECH PATHOLOGISTS, AUDIOLOGISTS	1,220	0.06	1,340	0.06	120	9.8%
32317164	RECREATION THERAPISTS	640	0.03	690	0.03	50	7.8%
32399167	ALL OTHER THERAPISTS	800	0.04	850	0.03	50	6.2%
32500000	HEALTH CARE MAINTENANCE, TREATING	48,930	2.47	60,550	2.73	11,620	23.7%
32502160	REGISTERED NURSES	27,570	1.39	36,230	1.63	8,660	31.4%
32505198	LICENSED PRACTICAL NURSES	13,640	0.68	15,540	0.70	1,900	13.9%
32508197	EMERGENCY MEDICAL TECHNICIANS	2,170	0.10	2,380	0.10	210	9.6%
32511158	PHYSICIAN ASSISTANTS	660	0.03	780	0.03	120	18.1%
32514154	OPTICIANS, DISPENSING & MEASUR.	1,060	0.05	1,110	0.05	50	4.7%
32517156	PHARMACISTS	2,630	0.13	3,090	0.13	460	17.4%
32521153	DIETITIANS AND NUTRITIONISTS	840	0.04	980	0.04	140	16.6%
32523194	DIETETIC TECHNICIANS	380	0.01	440	0.01	60	15.7%
32900192	MED. TECHNICIANS & TECHNOLOGISTS	17,150	0.86	20,270	0.91	3,120	18.1%
32902201	MED./CLINICAL LAB. TECHNOLOGISTS	3,070	0.15	3,370	0.15	300	9.7%
32905200	MED./CLINICAL LAB. TECHNICIANS	1,540	0.07	1,730	0.07	190	12.3%
32908193	DENTAL HYGIENISTS	1,960	0.09	2,370	0.10	410	20.9%
32911202	MEDICAL RECORDS TECHN. & TECHNOL.	1,000	0.05	1,300	0.05	300	30.0%
32914204	NUCLEAR MEDICINE TECHNOLOGISTS	220	0.01	270	0.01	50	22.7%
32917206	RADIOLOGIC TECHNOLOGISTS	900	0.04	1,080	0.04	180	20.0%
32921205	RADIOLOGIC TECHNICIANS	1,410	0.07	1,680	0.07	270	19.1%
32923196	ELECTROENCEPHALOGRAPH TECHN.	100	0.00	130	0.00	30	30.0%
32926195	ELECTROCARDIOGRAPH TECHNICIANS	270	0.01	350	0.01	80	29.6%
32928207	SURGICAL TECHNICIANS	910	0.04	1,150	0.05	240	26.3%
32999208	ALL OTHER HEALTH PROF., PARA, TECH	5,760	0.29	6,850	0.30	1,090	18.9%
34000170	WRITER, ARTIST, ENTER., ATHLETE	15,930	0.80	18,650	0.84	2,720	17.0%
34002190	WRITERS AND EDITORS	3,180	0.16	3,760	0.17	580	18.2%
34005189	TECHNICAL WRITERS	250	0.01	280	0.01	30	12.0%
34008183	PUBLIC RELATIONS SPECIALISTS	1,740	0.08	2,180	0.09	440	25.2%

TABLE 14

WISCONSIN OCCUPATIONAL GROWTH PROJECTIONS
EMPLOYMENT BY OCCUPATION, 1985 PROJECTED TO 1995
(Continued)

OCCUPATION CODE	OCCUPATION TITLE	BASE YEAR 1985		PROJECTED YEAR 1995			
		ANNUAL AVERAGE EMPLOYMENT	PERCENT OF TOTAL EMPLOYMENT	ANNUAL AVERAGE EMPLOYMENT	PERCENT OF TOTAL EMPLOYMENT	CHANGE IN EMPLOYMENT 1985-95	PERCENTAGE CHANGE 1985-95
34011187	REPORTERS AND CORRESPONDENTS	1,590	0.08	1,860	0.08	270	16.9%
34014186	BROADCAST NEWS ANALYSTS	170	0.00	170	0.00	0	0.0%
34017185	ANNOUNCERS, RADIO AND TV	1,150	0.05	1,150	0.05	0	0.0%
34021249	ANNOUNCERS, OTHER	*	***	*	***	*	***
34023181	PHOTOGRAPHERS	920	0.04	1,120	0.05	200	21.7%
34026180	CAMERA OPERATORS, TV & MOVIES	130	0.00	150	0.00	20	15.3%
34028229	BROADCAST TECHNICIANS	360	0.01	380	0.01	20	5.5%
34032250	FILM EDITORS	30	0.00	30	0.00	0	0.0%
34035171	ARTISTS AND COMMERCIAL ARTISTS	1,090	0.05	1,380	0.06	290	26.6%
34038174	DESIGNERS, EXC. INTERIOR DESIGN.	1,740	0.08	2,020	0.09	280	16.0%
34041251	INTERIOR DESIGNERS	800	0.04	930	0.04	130	16.2%
34044175	MERCHANDISE DISPLAYERS	470	0.02	540	0.02	70	14.8%
34047177	MUSIC DIRECTORS, SINGERS, & REL.	100	0.00	120	0.00	20	20.0%
34051178	MUSICIANS, INSTRUMENTAL	770	0.03	930	0.04	160	20.7%
34053173	DANCERS AND CHOREOGRAPHERS	110	0.00	130	0.00	20	18.1%
34056182	PRODUCERS, ACTORS, ENTERTAINERS	280	0.01	330	0.01	50	17.8%
34058172	ATHLETE, COACH, UMPIRE & RELATED	1,050	0.05	1,190	0.05	140	13.3%
35000191	OTHER PROFESS. AND TECHNICAL OCC	18,460	0.93	21,200	0.95	2,740	14.8%
39002228	AIR TRAFFIC CONTROLLERS	240	0.01	250	0.01	10	4.1%
39005246	TRAFFIC TECHNICIANS	20	0.00	20	0.00	0	0.0%
39008241	RADIO OPERATORS	120	0.00	120	0.00	0	0.0%
39011245	FUNERAL DIRECTORS AND MORTICIANS	600	0.03	730	0.03	130	21.6%
39014244	EMBALMERS	110	0.00	140	0.00	30	27.2%
39099243	ALL OTHER TECHNICIANS	10	0.00	10	0.00	0	0.0%
39999247	ALL OTHER PROF., PARAPROF., TECHN.	17,370	0.87	19,940	0.90	2,570	14.7%
40000253	SALES AND RELATED OCCUPATIONS	191,900	9.69	221,500	10.01	29,600	15.4%
41002268	FIRST LINE SUPERVISORS, SALES	10,060	0.50	11,530	0.52	1,470	14.6%
43000000	SERVICE SALES OCCUPATIONS	14,570	0.73	16,780	0.75	2,210	15.1%
43002256	INSURANCE SALES WORKERS	5,220	0.26	5,990	0.27	770	14.7%
43005258	BROKERS, REAL ESTATE	530	0.02	630	0.02	100	18.8%
43008259	SALES AGENTS, REAL ESTATE	320	0.01	380	0.01	60	18.7%
43011260	REAL ESTATE APPRAISERS	420	0.02	500	0.02	80	19.0%
43014262	SECURITIES, FINANCIAL SERV. SALES	2,060	0.10	2,510	0.11	450	21.8%
43017271	SALES AGENTS, BUSINESS SERVICES	1,940	0.09	2,220	0.10	280	14.4%
43021264	TRAVEL AGENTS	1,700	0.08	1,770	0.08	70	4.1%
43023270	SALES AGENTS, ADVERTISING	1,550	0.07	1,810	0.08	260	16.7%
43099266	ALL OTHER SERVICE SALES OCC.	830	0.04	990	0.04	160	19.2%
49000000	COMMODITY SALES	167,270	8.45	193,190	8.73	25,920	15.4%
49002272	SALES ENGINEERS	1,350	0.06	1,480	0.06	130	9.6%
49005274	SALES REPS, SCIENTIF. PROD. EXC. RET	8,740	0.44	9,740	0.44	1,000	11.4%
49008269	SALES REPS. EXC. SCIENTIF & RETAIL	20,840	1.05	23,650	1.06	2,810	13.4%
49011261	SALESPERSONS, RETAIL	61,890	3.12	69,930	3.16	8,040	12.9%

TABLE 14
WISCONSIN OCCUPATIONAL GROWTH PROJECTIONS
EMPLOYMENT BY OCCUPATION, 1985 PROJECTED TO 1995
(Continued)

OCCUPATION CODE	OCCUPATION TITLE	BASE YEAR 1985		PROJECTED YEAR 1995			
		ANNUAL AVERAGE EMPLOYMENT	PERCENT OF TOTAL EMPLOYMENT	ANNUAL AVERAGE EMPLOYMENT	PERCENT OF TOTAL EMPLOYMENT	CHANGE IN EMPLOYMENT 1985-95	PERCENTAGE CHANGE 1985-95
49014273	SALESPERSONS, PARTS	5,150	0.26	6,030	0.27	880	17.0%
49017255	COUNTER AND RENTAL CLERKS	2,340	0.11	2,820	0.12	480	20.5%
49021263	STOCK CLERKS, SALES FLOOR	21,140	1.06	22,870	1.03	1,730	8.1%
49023254	CASHIERS	37,770	1.90	47,390	2.14	9,620	25.4%
49026275	VENDORS, SOLICITORS, DOOR-TO-DOOR	2,190	0.11	2,550	0.11	360	16.4%
49032267	DEMONSTRATORS, PROMOTERS, MODELS	140	0.00	160	0.00	20	14.2%
49999265	ALL OTHER SALES & RELATED OCC.	5,730	0.28	6,580	0.29	850	14.8%
50000276	CLERICAL & ADMIN. SUPPORT OCC.	325,380	16.44	351,720	15.89	26,340	8.0%
51002369	FIRST LINE SUPERVISORS, CLERICAL	13,800	0.69	15,690	0.70	1,890	13.6%
53000000	INDUSTRY SPECIFIC SUPPORT OCC.	40,380	2.04	45,830	2.07	5,450	13.4%
53100000	BANKING, SECURITY, FINANCE, CREDIT	19,600	0.99	22,040	0.99	2,440	12.4%
53102366	TELLERS	10,970	0.55	11,950	0.54	980	8.9%
53105309	NEW ACCOUNTS CLERKS	1,640	0.08	1,920	0.08	280	17.0%
53108299	TRANSIT CLERKS	480	0.02	570	0.02	90	18.7%
53111372	LOAN INTERVIEWERS	90	0.00	110	0.00	20	22.2%
53114352	CREDIT AUTHORIZERS	200	0.01	230	0.01	30	15.0%
53117353	CREDIT CHECKERS	530	0.02	640	0.02	110	20.7%
53121358	LOAN AND CREDIT CLERKS	2,550	0.12	2,980	0.13	430	16.8%
53123278	ADJUSTMENT CLERKS	2,030	0.10	2,370	0.10	340	16.7%
53126340	STATEMENT CLERKS	830	0.04	980	0.04	150	18.0%
53128335	BROKERAGE CLERKS	280	0.01	290	0.01	10	3.5%
53200333	RECORDS PROCESSING OCC. EXC FINAN	20,780	1.05	23,800	1.07	3,020	14.5%
53302280	INSURANCE ADJUSTERS, INVESTIGATOR	3,000	0.15	3,600	0.16	600	20.0%
53305281	INSURANCE APPRAISERS, AUTO DAMAG	250	0.01	290	0.01	40	16.0%
53308283	INSURANCE EXAMINING CLERKS	20	0.00	20	0.00	0	0.0%
53311282	INSURANCE CLAIMS CLERKS	1,470	0.07	1,620	0.07	150	10.2%
53314284	INSURANCE POLICY PROCESS. CLERKS	3,210	0.16	3,520	0.15	310	9.6%
53502286	WELFARE ELIGIBILITY WORKERS	850	0.04	920	0.04	70	8.2%
53505371	INVESTIGATORS, CLERICAL	40	0.00	50	0.00	10	25.0%
53508279	BILL AND ACCOUNT COLLECTORS	1,190	0.06	1,450	0.06	260	21.8%
53702351	COURT CLERKS	600	0.03	690	0.03	90	15.0%
53705359	MUNICIPAL CLERKS	1,210	0.06	1,310	0.05	100	8.2%
53708285	LICENSE CLERKS	130	0.00	140	0.00	10	7.6%
53802313	TRAVEL CLERKS	180	0.00	210	0.00	30	16.6%
53805312	RESERVATION & TRANS. TICKET AGENT	640	0.03	660	0.02	20	3.1%
53808308	HOTEL DESK CLERKS	1,210	0.06	1,410	0.06	200	16.5%
53902337	LIBRARY ASSISTANTS & BOOKMOBILE	1,890	0.09	2,070	0.09	180	9.5%
53904363	TEACHER AIDES & EDUC. ASSISTANTS	3,990	0.20	4,770	0.21	780	19.5%
53908334	ADVERTISING CLERKS	130	0.00	160	0.00	30	23.0%
53911360	PROOFREADERS AND COPY MARKERS	440	0.02	520	0.02	80	18.1%
53914361	REAL ESTATE CLERKS	350	0.01	420	0.01	70	20.0%
55000000	SECRETARIAL/GENERAL OFFICE OCC.	193,150	9.76	207,840	9.39	14,690	7.6%

TABLE 14

WISCONSIN OCCUPATIONAL GROWTH PROJECTIONS
 EMPLOYMENT BY OCCUPATION, 1985 PROJECTED TO 1995
 (Continued)

OCCUPATION CODE	OCCUPATION TITLE	BASE YEAR 1985		PROJECTED YEAR 1995			
		ANNUAL AVERAGE EMPLOYMENT	PERCENT OF TOTAL EMPLOYMENT	ANNUAL AVERAGE EMPLOYMENT	PERCENT OF TOTAL EMPLOYMENT	CHANGE IN EMPLOYMENT 1985-95	PERCENTAGE CHANGE 1985-95
55100000	SECRETARIES	56,970	2.87	64,890	2.93	7,920	13.9%
55102343	LEGAL SECRETARIES	3,740	0.18	4,420	0.19	680	18.1%
55105344	MEDICAL SECRETARIES	3,420	0.17	4,120	0.18	700	20.4%
55199345	ALL OTHER SECRETARIES	49,820	2.51	56,360	2.54	6,540	13.1%
55300000	GENERAL OFFICE OCCUPATIONS	136,180	6.88	142,950	6.46	6,770	4.9%
55302346	STENOGRAPHERS	2,690	0.13	1,640	0.07	-1,050	-39.0%
55305310	RECEPTIONISTS, INFORMATION CLERKS	10,540	0.53	11,410	0.51	870	8.2%
55307347	TYPISTS	10,820	0.54	10,330	0.46	-490	-4.5%
55311349	TYPISTS, WORD PROCESSING EQUIP.	5,020	0.25	5,800	0.26	780	15.5%
55314339	PERSONNEL CLERKS, EXCEPT PAYROLL	1,760	0.08	2,000	0.09	240	13.6%
55317368	CORRESPONDENCE CLERKS	660	0.03	750	0.03	90	13.6%
55321336	FILE CLERKS	4,380	0.22	4,140	0.18	-240	-5.4%
55323338	ORDER CLERKS: MATERIALS, SERVICE	4,420	0.22	5,070	0.22	650	14.7%
55326325	PROCUREMENT CLERKS	910	0.04	1,010	0.04	100	10.9%
55328362	STATISTICAL CLERKS	580	0.02	520	0.02	-60	-10.3%
55332370	INTERVIEWING CLERKS, EX. PERSONNEL	1,470	0.07	1,740	0.07	270	18.3%
55335354	CUSTOMER SERVICE REPS, UTILITIES	1,430	0.07	1,580	0.07	150	10.4%
55338305	BOOKKEEPING & ACCOUNTING CLERKS	37,690	1.90	40,120	1.81	2,430	6.4%
55341306	PAYROLL AND TIMEKEEPING CLERKS	3,830	0.19	3,560	0.16	-270	-7.0%
55344303	BILLING, COST AND RATE CLERKS	5,380	0.27	5,990	0.27	610	11.3%
55347357	GENERAL OFFICE CLERKS	44,610	2.25	47,310	2.13	2,700	6.0%
55500000	DATA PROC, COMM EQUIP, DISTRIB, OCC	78,050	3.94	82,350	3.72	4,300	5.5%
56000000	DATA PROCESSING, OFFICE MACHINES	16,090	0.81	16,530	0.74	440	2.7%
56002304	BILL., POST, CALCULATING MACH. OP	1,720	0.08	1,920	0.08	200	11.6%
56005298	DUPLICATING MACHINE OPERATORS	380	0.01	360	0.01	-20	-5.2%
56008301	MAIL MACHINE OPERATORS	510	0.02	600	0.02	90	17.6%
56011295	COMPUTER OPERATORS, EXC. PERIPH.	3,620	0.18	4,410	0.19	790	21.8%
56014296	PERIPHERAL EDP EQUIP. OPERATORS	690	0.03	840	0.03	150	21.7%
56017355	DATA ENTRY KEYERS, EX. COMPOSING	7,410	0.37	6,380	0.28	-1,030	-13.9%
56021356	DATA ENTRY KEYERS, COMPOSING	590	0.02	770	0.03	180	30.5%
56099300	ALL OTHER OFFICE MACH. OPERATORS	1,160	0.05	1,260	0.05	100	8.6%
57100287	COMMUNICATIONS EQUIP. OPERATORS	4,750	0.24	5,370	0.24	620	13.0%
57102291	SWITCHBOARD OPERATORS	4,180	0.21	4,830	0.21	650	15.5%
57105290	DIRECTORY ASSISTANCE OPERATORS	390	0.01	380	0.01	-10	-2.5%
57108289	CENTRAL OFFICE OPERATORS	120	0.00	110	0.00	-10	-8.3%
57111292	TELEGRAPH AND TELETYPE OPERATORS	20	0.00	20	0.00	0	0.0%
57199293	ALL OTHER COMMUNICATION OPERATOR	30	0.00	40	0.00	10	33.3%
57300314	MAIL & MESSAGE DISTRIB. WORKER	9,040	0.45	9,690	0.43	650	7.1%
57302315	MAIL CLERKS, EXC. MAIL MACHINE	1,710	0.08	1,730	0.07	20	1.1%
57305317	POSTAL MAIL CARRIERS	3,970	0.20	4,490	0.20	520	13.0%
57308318	POSTAL SERVICE CLERKS	2,730	0.13	2,780	0.12	50	1.8%
57311316	MESSENGERS	630	0.03	700	0.03	70	11.1%

TABLE 14

WISCONSIN OCCUPATIONAL GROWTH PROJECTIONS
 EMPLOYMENT BY OCCUPATION, 1985 PROJECTED TO 1995
 (Continued)

OCCUPATION CODE	OCCUPATION TITLE	BASE YEAR 1985		PROJECTED YEAR 1995			
		ANNUAL AVERAGE EMPLOYMENT	PERCENT OF TOTAL EMPLOYMENT	ANNUAL AVERAGE EMPLOYMENT	PERCENT OF TOTAL EMPLOYMENT	CHANGE IN EMPLOYMENT 1985-95	PERCENTAGE CHANGE 1985-95
58000319	MATERIAL RECORD., SCHED.,DISTRIB	40,430	2.04	41,990	1.89	1,560	3.8%
58002322	DISPATCHER:POLICE,FIRE,AMBULANCE	1,340	0.06	1,460	0.06	120	8.9%
58005321	DISPATCHERS: EXC. POL.,FIRE,AMB.	1,720	0.08	1,910	0.08	190	11.0%
58008326	PRODUCTION, EXPEDITING CLERKS	4,020	0.20	4,140	0.18	120	2.9%
58011329	TRANSPORTATION AGENTS	100	0.00	110	0.00	10	10.0%
58014323	METER READERS, UTILITIES	980	0.04	1,000	0.04	20	2.0%
58017330	WEIGHERS, MEASURERS, CHECKERS	450	0.02	480	0.02	30	6.6%
58021332	MARKING CLERKS	1,280	0.06	1,470	0.06	190	14.8%
58023327	STOCK CLERKS:STOCKROOM OR WAREH.	12,930	0.65	12,730	0.57	-200	-1.5%
58026324	ORDER FILLERS, SALES	3,190	0.16	3,130	0.14	-60	-1.8%
58028328	TRAFFIC, SHIPPING, & REC. CLERKS	12,770	0.64	13,640	0.61	870	6.8%
58099331	ALL OTHER MATERIAL WORKERS	1,650	0.08	1,930	0.08	280	16.9%
59999367	ALL OTHER CLERICAL & ADM.SUPPORT	7,750	0.39	8,780	0.39	1,030	13.2%
60000373	SERVICE OCCUPATIONS	343,170	17.34	396,990	17.94	53,820	15.6%
61000460	FIRST LINE SUPERVISORS, SERVICE	11,720	0.59	13,360	0.60	1,640	13.9%
61002433	FIRE FIGHTING & PREV.SUPERVISORS	870	0.04	990	0.04	120	13.7%
61005438	POLICE AND DETECTIVE SUPERVISORS	1,460	0.07	1,590	0.07	130	8.9%
61008457	HOUSEKEEPERS, INSTITUTIONAL	1,490	0.07	1,800	0.08	310	20.8%
61099466	ALL OTHER SERVICE SUPERVISORS	7,900	0.39	8,980	0.40	1,080	13.6%
62000422	PRIVATE HOUSEHOLD OCCUPATIONS	1,450	0.07	1,740	0.07	290	20.0%
62021423	COOKS, PRIVATE HOUSEHOLD	30	0.00	40	0.00	10	33.3%
62031424	HOUSEKEEPERS AND BUTLERS	60	0.00	80	0.00	20	33.3%
62041425	CHILD CARE WKRS., PVT. HOUSEHOLD	560	0.02	710	0.03	150	26.7%
62061426	CLEANERS & SERVANTS, PVT. HOUSE.	800	0.04	910	0.04	110	13.7%
63000429	PROTECTIVE SERVICE OCCUPATIONS	28,760	1.45	32,220	1.45	3,460	12.0%
63001434	FIRE INSPECTORS	110	0.00	120	0.00	10	9.0%
63005436	FOREST FIRE INSPECT & PREVENTION	90	0.00	90	0.00	0	0.0%
63008432	FIRE FIGHTERS	4,720	0.23	5,370	0.24	650	13.7%
63011441	POLICE DETECTIVES	1,020	0.05	1,100	0.04	80	7.8%
63014442	POLICE PATROL OFFICERS	6,670	0.33	7,380	0.33	710	10.6%
63017430	CORRECTION OFFICERS AND JAILERS	2,420	0.12	3,010	0.13	590	24.3%
63021446	PARKING ENFORCEMENT OFFICERS	160	0.00	200	0.00	40	25.0%
63023444	BAILIFFS	230	0.01	250	0.01	20	8.6%
63028440	CRIMINAL INVESTIGATORS, FEDERAL	80	0.00	80	0.00	0	0.0%
63030443	SHERIFFS & OTHER LAW ENFORCEMENT	1,890	0.09	2,000	0.09	110	5.8%
63031447	SHERIFFS,DEPUTIES,U.S. MARSHALLS	1,400	0.07	1,430	0.06	30	2.1%
63035452	PRIVATE DETECTIVE & INVESTIGATOR	490	0.02	570	0.02	80	16.3%
63038455	RAILROAD POLICE & SPECIAL AGENTS	10	0.00	10	0.00	0	0.0%
63040450	OTHER PROTECTIVE SERVICE WORKERS	9,890	0.49	11,010	0.49	1,120	11.3%
63041445	FISH AND GAME WARDENS	180	0.00	190	0.00	10	5.5%
63044451	CROSSING GUARDS	1,370	0.06	1,460	0.06	90	6.5%
63047453	GUARDS AND WATCH GUARDS	8,330	0.42	9,350	0.42	1,020	12.2%

TABLE 14

WISCONSIN OCCUPATIONAL GROWTH PROJECTIONS
 EMPLOYMENT BY OCCUPATION, 1985 PROJECTED TO 1995
 (Continued)

OCCUPATION CODE	OCCUPATION TITLE	BASE YEAR 1985		PROJECTED YEAR 1995			
		ANNUAL AVERAGE EMPLOYMENT	PERCENT OF TOTAL EMPLOYMENT	ANNUAL AVERAGE EMPLOYMENT	PERCENT OF TOTAL EMPLOYMENT	CHANGE IN EMPLOYMENT 1985-95	PERCENTAGE CHANGE 1985-95
63099454	ALL OTHER PROTECTIVE SERVICE	1,490	0.07	1,640	0.07	-450	10.0%
65000379	FOOD AND BEVERAGE OCCUPATIONS	169,820	8.58	196,920	8.90	27,100	15.9%
65002391	HOSTS & HOSTESSES: REST., LOUNGE	3,450	0.17	4,100	0.18	650	18.8%
65005381	BARTENDERS	28,060	1.41	33,470	1.51	5,410	19.2%
65008392	WAITERS AND WAITRESSES	43,900	2.21	51,200	2.31	7,300	16.6%
65011395	FOOD SERVERS, OUTSIDE	1,590	0.08	1,890	0.08	300	18.8%
65014388	DINING ROOM & BARTENDER HELPERS	9,870	0.49	11,310	0.51	1,440	14.5%
65017394	COUNTER ATTENDANTS	4,820	0.24	5,470	0.24	650	13.4%
65021380	BAKERS, BREAD AND PASTRY	3,570	0.18	4,130	0.18	560	15.6%
65023628	BUTCHERS AND MEAT CUTTERS	3,890	0.19	4,410	0.19	520	13.3%
65026384	COOKS, RESTAURANT	10,460	0.52	12,580	0.56	2,120	20.2%
65028383	COOKS, INSTITUTION OR CAFETERIA	8,210	0.41	9,450	0.42	1,240	15.1%
65032387	COOKS, SPECIALTY FAST FOOD	9,380	0.47	10,580	0.47	1,200	12.7%
65035386	COOKS, SHORT ORDER	3,080	0.15	3,500	0.15	420	13.6%
65038390	FOOD PREPARATION WORKERS	19,730	0.99	22,790	1.03	3,060	15.5%
65041389	COMB. FOOD PREPARATION, SERVICE	12,820	0.64	13,960	0.63	1,140	8.8%
65099393	ALL OTHER FOOD SERVICE WORKERS	6,990	0.35	8,070	0.36	1,080	15.4%
66000396	HEALTH SERVICE OCCUPATIONS	49,160	2.48	57,270	2.58	8,110	16.4%
66002398	DENTAL ASSISTANTS	3,520	0.17	4,250	0.19	730	20.7%
66005399	MEDICAL ASSISTANTS	2,230	0.11	3,010	0.13	780	34.9%
66008401	NURSING AIDES AND ORDERLIES	35,670	1.80	41,060	1.85	5,390	15.1%
66011418	HOME HEALTH AIDES	1,960	0.09	2,310	0.10	350	17.8%
66014402	PSYCHIATRIC AIDES	1,410	0.07	1,580	0.07	170	12.0%
66017405	PHYSICAL, CORRECT.THERAPY ASSIST	740	0.03	810	0.03	70	9.4%
66021403	OCCUPATIONAL THERAPY ASSISTANTS	330	0.01	360	0.01	30	9.0%
66023397	AMBULANCE DRIVERS & ATTENDANTS	370	0.01	400	0.01	30	8.1%
66026404	PHARMACY ASSISTANTS	1,420	0.07	1,730	0.07	310	21.8%
66099465	ALL OTHER HEALTH SERVICE WORKERS	1,510	0.07	1,770	0.08	260	17.2%
67000374	CLEANING & BUILDING SERVICE OCC.	58,000	2.93	66,420	3.00	8,420	14.5%
67002377	MAIDS AND HOUSEKEEPING CLEANERS	10,920	0.55	12,970	0.58	2,050	18.7%
67005376	JANITORS AND CLEANERS, EXC.MAIDS	40,770	2.06	46,600	2.10	5,830	14.2%
67008378	PEST CONTROLLERS AND ASSISTANTS	180	0.00	160	0.00	-20	-11.1%
67011459	ELEVATOR OPERATORS	40	0.00	40	0.00	0	0.0%
67099464	ALL OTHER CLEAN,BUILDING SERVICE	6,090	0.30	6,650	0.30	560	9.1%
68000406	PERSONAL SERVICE OCCUPATIONS	17,190	0.86	20,410	0.92	3,220	18.7%
68002409	BARBERS	850	0.04	970	0.04	120	14.1%
68005412	HAIRDRESSERS AND COSMETOLOGISTS	10,240	0.51	12,500	0.56	2,260	22.0%
68008413	MANICURISTS	110	0.00	130	0.00	20	18.1%
68011414	SHAMPOOERS	40	0.00	50	0.00	10	25.0%
68014407	AMUSEMENT & RECREATION ATTENDANT	2,120	0.10	2,510	0.11	390	18.3%
68017416	GUIDES	250	0.01	270	0.01	20	8.0%
68021421	USHERS, LOBBY ATT., TICKET TAKER	560	0.02	700	0.03	140	25.0%

TABLE 14

WISCONSIN OCCUPATIONAL GROWTH PROJECTIONS
EMPLOYMENT BY OCCUPATION, 1985 PROJECTED TO 1995
(Continued)

OCCUPATION CODE	OCCUPATION TITLE	BASE YEAR 1985		PROJECTED YEAR 1995			
		ANNUAL AVERAGE EMPLOYMENT	PERCENT OF TOTAL EMPLOYMENT	ANNUAL AVERAGE EMPLOYMENT	PERCENT OF TOTAL EMPLOYMENT	CHANGE IN EMPLOYMENT 1985-95	PERCENTAGE CHANGE 1985-95
68023408	BAGGAGE PORTERS AND BELLHOPS	280	0.01	280	0.01	0	0.0%
68026415	FLIGHT ATTENDANTS	30	0.00	30	0.00	0	0.0%
68028462	TRANSPORTATION ATTENDANTS	0	0.00	0	0.00	0	***. %
68032463	WARDROBE & DRESS ROOM ATTENDANTS	40	0.00	40	0.00	0	0.0%
68035420	SOCIAL WELFARE SERVICE AIDES	340	0.01	380	0.01	40	11.7%
68038410	CHILD CARE WORKERS	2,180	0.11	2,360	0.10	180	8.2%
68041461	FUNERAL ATTENDANTS	170	0.00	210	0.00	40	23.5%
69999458	ALL OTHER SERVICE WORKERS	7,080	0.35	8,640	0.39	1,560	22.0%
70000467	AGRICULTURE, FORESTRY, FISHING	14,840	0.75	16,770	0.75	1,930	13.0%
71000479	FARM OPERATORS AND MANAGERS	140	0.00	150	0.00	10	7.1%
71002480	FARMERS	90	0.00	90	0.00	0	0.0%
71005481	FARM MANAGERS	50	0.00	60	0.00	10	20.0%
72000468	SUPERVISORS, FARM, FOREST, AG. REL.	460	0.02	500	0.02	40	8.6%
72002469	FIRST LINE SUPERV. AG., ETC.	450	0.02	500	0.02	40	8.6%
73000487	FORESTRY AND LOGGING OCCUPATIONS	1,580	0.07	1,610	0.07	30	1.8%
73002489	FALLERS AND BUCKERS	730	0.03	740	0.03	10	1.3%
73005488	CHOKE SETTERS	30	0.00	30	0.00	0	0.0%
73008493	LOG HANDLING EQUIPMENT OPERATORS	330	0.01	340	0.01	10	3.0%
73011491	LOGGING TRACTOR OPERATORS	470	0.02	490	0.02	20	4.2%
73099494	ALL OTHER TIMBER CUTTING WORKERS	20	0.00	30	0.00	10	50.0%
74000476	FARM OCCUPATIONS	660	0.03	880	0.03	220	33.3%
74002477	FARM WORKERS	660	0.03	880	0.03	220	33.3%
77000482	FISHERS, HUNTERS, AND TRAPPERS	0	0.00	0	0.00	0	***. %
77005484	FISHERS, HUNTERS, AND TRAPPERS	0	0.00	0	0.00	0	***. %
79000000	OTHER AGRICULTURE & FORESTRY OCC	10,630	0.53	12,150	0.54	1,520	14.2%
79002490	FOREST AND CONSERVATION WORKERS	1,030	0.05	1,070	0.04	40	3.8%
79005478	NURSERY WORKERS	270	0.01	310	0.01	40	14.8%
79008492	LOG GRADERS AND SCALERS	80	0.00	80	0.00	0	0.0%
79011475	GRADERS & SORTERS, AGRIC. PRODUCT	340	0.01	370	0.01	30	8.8%
79014474	GARDENERS AND GROUNDSKEEPERS	7,950	0.40	9,230	0.41	1,280	16.1%
79017473	ANIMAL CARETAKERS, EXCEPT FARM	650	0.03	790	0.03	140	21.5%
79021496	FARM EQUIPMENT OPERATORS	310	0.01	300	0.01	-10	-3.2%
79999495	ALL OTHER AGRIC., FOREST, FISH.	1,370	0.06	1,480	0.06	110	8.0%
80000000	PRODUCTION, OPER., MAINTENANCE	611,490	30.90	659,220	29.79	47,730	7.8%
81000498	BLUE COLLAR WORKER SUPERVISORS	32,720	1.65	35,110	1.58	2,390	7.3%
81002501	FIRST LINE SUPERV.: MECH. & REPAIR	6,200	0.31	6,900	0.31	700	11.2%
81005499	FIRST LINE SUPERV.: CONST. EXTRAC.	2,900	0.14	3,140	0.14	240	8.2%
81008502	FIRST LINE SUPERV.: PRODUCTION	18,890	0.95	19,910	0.90	1,020	5.3%
81011503	FIRST LINE SUPERV.: TRANSPORT.	2,010	0.10	2,140	0.09	130	6.4%
81017500	FIRST LINE SUPERV.: HELP, LABORERS	1,140	0.05	1,180	0.05	40	3.5%
81099504	ALL OTHER FIRST LINE SUPERVISORS	1,610	0.08	1,840	0.08	230	14.2%
83000668	INSPECTORS & RELATED OCCUPATIONS	15,140	0.76	16,360	0.73	1,220	8.0%

TABLE 14

WISCONSIN OCCUPATIONAL GROWTH PROJECTIONS
EMPLOYMENT BY OCCUPATION, 1985 PROJECTED TO 1995
(Continued)

OCCUPATION CODE	OCCUPATION TITLE	BASE YEAR 1985		PROJECTED YEAR 1995			
		ANNUAL AVERAGE EMPLOYMENT	PERCENT OF TOTAL EMPLOYMENT	ANNUAL AVERAGE EMPLOYMENT	PERCENT OF TOTAL EMPLOYMENT	CHANGE IN EMPLOYMENT 1985-95	PERCENTAGE CHANGE 1985-95
83002669	INSPECTORS, TESTERS, AND GRADERS	5,270	0.26	5,980	0.27	710	13.4%
83004670	OTHER INSPECTORS, TESTER, GRADER	260	0.01	310	0.01	50	19.2%
83005671	PRODUCTION INSPECTORS, GRADERS	9,230	0.46	9,650	0.43	420	4.5%
83008672	TRANSPORTATION INSPECTORS	100	0.00	110	0.00	10	10.0%
83099673	ALL OTHER INSPECTORS, TESTERS	280	0.01	320	0.01	40	14.2%
85000559	MECHANICS, INSTALLERS, REPAIRERS	79,810	4.03	89,450	4.04	9,640	12.0%
85100576	MACHINERY MECHANICS, INSTALLERS	29,890	1.51	33,310	1.50	3,420	11.4%
85112580	MACHINERY MECHANICS:TEXTILE MACH	140	0.00	110	0.00	-30	-21.4%
85113579	MACHINERY MECHANICS: SEWING MACH	90	0.00	80	0.00	-10	-11.1%
85116578	MACHINERY MECHANICS:MARINE EQUIP	40	0.00	40	0.00	0	0.0%
85118581	MACHINERY MECHANICS: PLANT	770	0.03	830	0.03	60	7.7%
85119583	ALL OTHER MACHINERY MECHANICS	5,230	0.26	5,670	0.25	440	8.4%
85123586	MILLWRIGHTS	2,340	0.11	2,510	0.11	170	7.2%
85126542	REFRACTORY MATERIAL REPAIRERS	40	0.00	40	0.00	0	0.0%
85128584	MACHINERY MAINTENANCE WORKERS	1,270	0.06	1,360	0.06	90	7.0%
85132585	MAINTENANCE REPAIRERS, GEN.UTIL.	19,980	1.00	22,680	1.02	2,700	13.5%
85300587	VEHICLE & MOBILE EQUIP. MECHANIC	26,770	1.35	30,780	1.39	4,010	14.9%
85301592	AUTO AND MOTORCYCLE MECHANICS	20	0.00	20	0.00	0	0.0%
85302593	AUTOMOTIVE MECHANICS	12,160	0.61	14,070	0.63	1,910	15.7%
85305591	AUTOMOTIVE BODY,RELATED REPAIRER	3,920	0.19	4,660	0.21	740	18.8%
85308594	MOTORCYCLE REPAIRERS	230	0.01	270	0.01	40	17.3%
85311595	BUS, TRUCK, DIESEL ENG. MECHANIC	5,250	0.26	6,020	0.27	770	14.6%
85314597	MOBILE HEAVY EQUIPMENT MECHANICS	860	0.04	960	0.04	100	11.6%
85317598	RAIL CAR REPAIRERS	340	0.01	370	0.01	30	8.8%
85320588	AIRCRAFT MECHANICS & ENGIN.SPEC.	10	0.00	10	0.00	0	0.0%
85321596	FARM EQUIPMENT MECHANICS	2,880	0.14	3,130	0.14	250	8.6%
85323590	AIRCRAFT MECHANICS	360	0.01	390	0.01	30	8.3%
85326589	AIRCRAFT ENGINE SPECIALISTS	40	0.00	40	0.00	0	0.0%
85328599	SMALL ENGINE SPECIALISTS	710	0.03	840	0.03	130	18.3%
85500560	COMMUNICATIONS EQUIP. MECHANICS	1,420	0.07	1,590	0.07	170	11.9%
85502561	CENTRAL OFFICE & PBX INSTAL/RPR.	1,170	0.05	1,320	0.05	150	12.8%
85505562	FRAME WIRERS, CENTRAL OFFICE	90	0.00	80	0.00	-10	-11.1%
85511564	SIGNAL OR TRACK SWITCH MAINT.	120	0.00	140	0.00	20	16.6%
85514563	RADIO MECHANICS	10	0.00	10	0.00	0	0.0%
85599565	ALL OTHER COMMUN.EQUIP.MECHANICS	30	0.00	40	0.00	10	33.3%
85700567	ELECTRICAL & ELECTRONIC EQ.MECH.	21,730	1.09	23,770	1.07	2,040	9.3%
85702575	TELEPHONE & CABLE TV INSTAL/RPR.	2,300	0.11	2,310	0.10	10	0.4%
85705568	DATA PROCESSING EQUIP. REPAIRERS	610	0.03	790	0.03	180	29.5%
85708572	HOME ENTERTAINMENT EQ. REPAIRERS	830	0.04	940	0.04	110	13.2%
85711607	ELECTR. HOME APPL. & POWER TOOL	770	0.03	900	0.04	130	16.8%
85714571	ELECTRIC MOTOR REPAIRERS	380	0.01	410	0.01	30	7.8%
85717573	ELECTRONICS REPAIRERS, COMM.&IND.	120	0.00	130	0.00	10	8.3%

TABLE 14

WISCONSIN OCCUPATIONAL GROWTH PROJECTIONS
EMPLOYMENT BY OCCUPATION, 1985 PROJECTED TO 1995
(Continued)

OCCUPATION CODE	OCCUPATION TITLE	BASE YEAR 1985		PROJECTED YEAR 1995			
		ANNUAL AVERAGE EMPLOYMENT	PERCENT OF TOTAL EMPLOYMENT	ANNUAL AVERAGE EMPLOYMENT	PERCENT OF TOTAL EMPLOYMENT	CHANGE IN EMPLOYMENT 1985-95	PERCENTAGE CHANGE 1985-95
85721622	POWERHOUSE & RELAY ELECTRICIANS	260	0.01	290	0.01	30	11.5%
85723570	ELECTRICAL POWERLINE INSTAL/RPR.	2,220	0.11	2,000	0.09	-220	-9.9%
85726574	TELEPH. STATION INSTALL.& REPAIR	370	0.01	300	0.01	-70	-18.9%
85728569	ELECTRICAL INSTALLERS & REPAIRER	280	0.01	310	0.01	30	10.7%
85799623	ALL OTHER ELECTRIC.,ELECTRO.MECH	570	0.02	630	0.02	60	10.5%
85902605	HEATING, A/C, REFRIG. MECHANICS	2,770	0.14	3,190	0.14	420	15.1%
85905615	PRECISION INSTRUMENT REPAIRERS	740	0.03	830	0.03	90	12.1%
85908604	ELECTROMEDICAL & BIOMED. REPAIR.	210	0.01	250	0.01	40	19.0%
85911603	ELECTRIC METER INSTALLERS/REPAIR	250	0.01	280	0.01	30	12.0%
85914620	CAMERA & PHOTOGRAPHIC REPAIRERS	80	0.00	90	0.00	10	12.5%
85917618	WATCHMAKERS	110	0.00	110	0.00	0	0.0%
85921613	MUSICAL INSTRUMENT REPAIR & TUNE	90	0.00	100	0.00	10	11.1%
85923609	LOCKSMITHS AND SAFE REPAIRERS	70	0.00	80	0.00	10	14.2%
85926614	OFFICE MACHINE,REGISTER SERVICER	950	0.04	1,120	0.05	170	17.8%
85928610	MECHANICAL CONTROL INSTALLERS	480	0.02	530	0.02	50	10.4%
85932621	ELEVATOR INSTALLERS & REPAIRERS	230	0.01	250	0.01	20	8.6%
85935616	RIGGERS	60	0.00	60	0.00	0	0.0%
85938612	MOBILE HOME REPAIRERS	250	0.01	280	0.01	30	12.0%
85944608	GAS APPLIANCE REPAIRERS	520	0.02	560	0.02	40	7.6%
85947602	COIN & VENDING MACHINE SERVICERS	560	0.02	630	0.02	70	12.5%
85951601	BICYCLE REPAIRERS	150	0.00	160	0.00	10	6.6%
85953617	TIRE REPAIRERS AND CHANGERS	1,540	0.07	1,730	0.07	190	12.3%
85956611	MENDERS, GARMENTS AND LINENS	330	0.01	360	0.01	30	9.0%
85999619	ALL OTHER MECHANICS, INSTALLERS	3,650	0.18	4,180	0.18	530	14.5%
87000000	CONSTRUCTION TRADES, EXTRACTIVE	49,580	2.50	54,300	2.45	4,720	9.5%
87000505	CONSTRUCTION WORKERS	48,280	2.44	52,830	2.38	4,550	9.4%
87102512	CARPENTERS	12,020	0.60	13,120	0.59	1,100	9.1%
87105514	CEILING TILE INSTALLERS	200	0.01	220	0.00	20	10.0%
87108517	DRYWALL INSTALLERS	550	0.02	610	0.02	60	10.9%
87111518	TAPERS	300	0.01	330	0.01	30	10.0%
87114519	LATHERS	120	0.00	120	0.00	0	0.0%
87202520	ELECTRICIANS	7,340	0.37	8,190	0.37	850	11.5%
87302508	BRICK MASONS	1,680	0.08	1,870	0.08	190	11.3%
87305509	STONE MASONS	190	0.00	240	0.01	50	26.3%
87308523	HARD TILE SETTERS	110	0.00	120	0.00	10	9.0%
87311515	CONCRETE AND TERRAZZO FINISHERS	1,440	0.07	1,600	0.07	160	11.1%
87314535	REINFORCING METAL WORKERS	220	0.01	250	0.01	30	13.6%
87317529	PLASTERERS AND STUCCO MASONS	210	0.01	220	0.00	10	4.7%
87402526	PAINTERS AND PAPERHANGERS	3,530	0.17	3,980	0.17	450	12.7%
87502530	PLUMBER, PIPEFITTER, STEAMFITTER	5,510	0.27	6,050	0.27	540	9.8%
87508527	PIPELAYERS	910	0.04	1,010	0.04	100	10.9%
87511533	SEPTIC TANK, SEWER SERVICERS	150	0.00	140	0.00	-10	-6.6%

TABLE 14

WISCONSIN OCCUPATIONAL GROWTH PROJECTIONS
EMPLOYMENT BY OCCUPATION, 1985 PROJECTED TO 1995
(Continued)

OCCUPATION CODE	OCCUPATION TITLE	BASE YEAR 1985		PROJECTED YEAR 1995			
		ANNUAL AVERAGE EMPLOYMENT	PERCENT OF TOTAL EMPLOYMENT	ANNUAL AVERAGE EMPLOYMENT	PERCENT OF TOTAL EMPLOYMENT	CHANGE IN EMPLOYMENT 1985-95	PERCENTAGE CHANGE 1985-95
87602513	CARPET INSTALLERS	460	0.02	530	0.02	70	15.2%
87605538	FLOOR LAYERS, EX. CARPET, WOOD, TILE	150	0.00	170	0.00	20	13.3%
87702506	AIR HAMMER OPERATORS	50	0.00	50	0.00	0	0.0%
87705541	PILE DRIVING OPERATORS	20	0.00	20	0.00	0	0.0%
87708540	PAVING, SURFACING, TAMPING	1,150	0.05	1,240	0.05	90	7.8%
87711524	HIGHWAY MAINTENANCE WORKERS	5,710	0.28	5,810	0.26	100	1.7%
87714531	RAIL-TRACK LAYING EQUIP. OPER.	270	0.01	280	0.01	10	3.7%
87802525	INSULATION WORKERS	660	0.03	730	0.03	70	10.6%
87805543	SHEET METAL DUCT INSTALLERS	10	0.00	10	0.00	0	0.0%
87808532	ROOFERS	1,750	0.08	2,040	0.09	290	16.5%
87811522	GLAZIERS	570	0.02	650	0.02	80	14.0%
87814536	STRUCTURAL METAL WORKERS	820	0.04	890	0.04	70	8.5%
87817521	FENCE ERECTORS	150	0.00	160	0.00	10	6.6%
87899537	ALL OTHER CONSTRUCTION WORKERS	2,050	0.10	2,200	0.09	150	7.3%
87900544	EXTRACTIVE AND BLASTING WORKERS	1,300	0.06	1,470	0.06	170	13.0%
87902554	EARTH DRILLERS, EX. OIL & GAS	140	0.00	140	0.00	0	0.0%
87905545	BLASTERS AND EXPLOSIVES WORKERS	20	0.00	20	0.00	0	0.0%
87908556	ROCK SPLITTERS, QUARRY	20	0.00	20	0.00	0	0.0%
87911550	ROTARY DRILL OPERATORS	0	0.00	0	0.00	0	***. %
87914547	DERRICK OPERATORS, OIL & GAS	0	0.00	0	0.00	0	***. %
87921551	ROUSTABOUTS	0	0.00	10	0.00	10	***. %
87943548	MINE CUTTING MACHINE OPERATORS	10	0.00	10	0.00	0	0.0%
87949558	ALL OTHER MINING MACH. OPERATORS	10	0.00	10	0.00	0	0.0%
87989553	ALL OTHER EXTRACTIVE OCC., EX. HEL	0	0.00	0	0.00	0	***. %
87999557	ALL OTHER CONSTR. & EXTRACTIVE	1,090	0.05	1,260	0.05	170	15.5%
89000624	PRECISION PRODUCTION OCCUPATIONS	176,330	8.91	186,860	8.44	10,530	5.9%
89100632	PRECISION METAL WORKERS	24,560	1.24	26,690	1.20	2,130	8.6%
89102643	TOOL AND DIE MAKERS	6,820	0.34	7,360	0.33	540	7.9%
89105636	PRECISION INSTRUMENT MAKERS	290	0.01	350	0.01	60	20.6%
89108639	MACHINISTS	8,870	0.44	9,610	0.43	740	8.3%
89111645	TOOL GRINDERS, FILERS, SHARPENERS	1,270	0.06	1,380	0.06	110	8.6%
89114640	PATTERN AND MODEL MAKERS, METAL	290	0.01	290	0.01	0	0.0%
89117638	PRECISION LAYOUT WORKERS, METAL	300	0.01	320	0.01	20	6.6%
89121642	SHIPFITTERS	530	0.02	540	0.02	10	1.8%
89123637	JEWELERS AND SILVERSMITHS	300	0.01	330	0.01	30	10.0%
89126635	PRECISION HAND WORKERS, JEWELRY	70	0.00	80	0.00	10	14.2%
89128634	PRECISION ETCHERS AND ENGRAVERS	100	0.00	110	0.00	10	10.0%
89132641	SHEET METAL WORKERS	5,020	0.25	5,570	0.25	550	10.9%
89135633	BOILERMAKERS	220	0.01	230	0.01	10	4.5%
89199644	ALL OTHER PRECISION METAL WORKER	490	0.02	530	0.02	40	8.1%
89300661	PRECISION WOODWORKERS	5,310	0.26	5,710	0.25	400	7.5%
89302664	PATTERN AND MODEL MAKERS, WOOD	240	0.01	260	0.01	20	8.3%

TABLE 14

WISCONSIN OCCUPATIONAL GROWTH PROJECTIONS
EMPLOYMENT BY OCCUPATION, 1985 PROJECTED TO 1995
(Continued)

OCCUPATION CODE	OCCUPATION TITLE	BASE YEAR 1985		PROJECTED YEAR 1995			
		ANNUAL AVERAGE EMPLOYMENT	PERCENT OF TOTAL EMPLOYMENT	ANNUAL AVERAGE EMPLOYMENT	PERCENT OF TOTAL EMPLOYMENT	CHANGE IN EMPLOYMENT 1985-95	PERCENTAGE CHANGE 1985-95
89305667	PATTERN MARKERS, WOOD	10	0.00	10	0.00	0	0.0%
89308665	WOOD MACHINISTS	1,380	0.06	1,450	0.06	70	5.0%
89311662	CABINETMAKERS & BENCH CARPENTERS	2,340	0.11	2,510	0.11	170	7.2%
89314663	FURNITURE FINISHERS	350	0.01	380	0.01	30	8.5%
89399666	ALL OTHER PRECISION WOODWORKERS	980	0.04	1,100	0.04	120	12.2%
89500652	PRECISION TEXTILE, APPAREL, FURN	2,590	0.13	2,860	0.12	270	10.4%
89502654	PATTERNMAKERS AND LAYOUT WORKERS	140	0.00	120	0.00	-20	-14.2%
89505653	CUSTOM TAILORS AND SEWERS	950	0.04	1,150	0.05	200	21.0%
89508656	UPHOLSTERERS	350	0.01	370	0.01	20	5.7%
89511655	SHOE AND LEATHER WORKERS	620	0.03	580	0.02	-40	-6.4%
89514660	SPOTTERS, DRY CLEANING	170	0.00	210	0.00	40	23.5%
89517659	PRESSERS, DELICATE FABRICS	320	0.01	380	0.01	60	18.7%
89521658	PRECISION DYERS	20	0.00	20	0.00	0	0.0%
89599657	ALL OTHER PRECISION TEXTILE, APPA	30	0.00	30	0.00	0	0.0%
89700646	PRECISION PRINTING WORKERS	3,440	0.17	3,940	0.17	500	14.5%
89702648	PRECISION COMPOSITOR, TYPESETTER	400	0.02	420	0.01	20	5.0%
89705651	JOB PRINTERS	890	0.04	1,030	0.04	140	15.7%
89708649	PRECISION LITHOGRAPHERS & PHOTO.	1,750	0.08	2,020	0.09	270	15.4%
89711647	BOOKBINDERS	280	0.01	320	0.01	40	14.2%
89799650	ALL OTHER PRECISION PRINTING	130	0.00	140	0.00	10	7.6%
89800625	PRECISION FOOD WORKERS	3,560	0.17	3,530	0.15	-30	-0.8%
89802629	SLAUGHTERERS AND BUTCHERS	1,110	0.05	1,090	0.04	-20	-1.8%
89805626	BAKERS, MANUFACTURING	500	0.02	500	0.02	0	0.0%
89808630	FOOD BATCHMAKERS	1,810	0.09	1,800	0.08	-10	-0.5%
89899631	ALL OTHER PRECISION FOOD, TOBACCO	150	0.00	150	0.00	0	0.0%
89900674	OTHER PRECISION WORKERS	5,450	0.27	6,100	0.27	650	11.9%
89902677	FOUNDRY MOLD AND CORE MAKERS	1,180	0.05	1,200	0.05	20	1.6%
89905678	MOLDERS & SHAPERS, EXC. JEWELRY	160	0.00	170	0.00	10	6.2%
89908679	PATTERNMAKERS, MODEL MAKERS	10	0.00	10	0.00	0	0.0%
89911676	DETAIL DESIGN DECORATORS & PAINT	180	0.00	190	0.00	10	5.5%
89914680	PHOTOGRAPHIC PROCESS WORKERS	380	0.01	420	0.01	40	10.5%
89917684	OPTICAL GOODS WORKERS	190	0.00	220	0.00	30	15.7%
89921675	DENTAL LABORATORY TECHNICIANS	1,140	0.05	1,400	0.06	260	22.8%
89923683	MEDICAL APPLIANCE MAKERS	70	0.00	90	0.00	20	28.5%
89999681	ALL OTHER PRECISION WORKERS	2,150	0.10	2,400	0.10	250	11.6%
91000685	MACH.SET., SET-UP OP., OPER. & TEND	33,110	1.67	33,360	1.50	250	0.7%
91102702	SAVING MACH. TOOL SETTER/OP., M/P	600	0.03	590	0.02	-10	-1.6%
91105695	LATHE, TURNING MACH. SETTER/OP., M/P	3,780	0.19	3,730	0.16	-50	-1.3%
91108691	DRILLING, BORING MACH. SET/OP., M/P	2,210	0.11	2,170	0.09	-40	-1.8%
91111698	MILLING, PLANING MACH. SET/OP., M/P	1,010	0.05	990	0.04	-20	-1.9%
91114694	GRINDING, BUFFING MACH. SET/OP., M/P	3,010	0.15	2,890	0.13	-120	-3.9%
91117697	MACHINE TOOL CUTTING OPER., M/P	6,160	0.31	5,970	0.26	-190	-3.0%

TABLE 14

WISCONSIN OCCUPATIONAL GROWTH PROJECTIONS
EMPLOYMENT BY OCCUPATION, 1985 PROJECTED TO 1995
(Continued)

OCCUPATION CODE	OCCUPATION TITLE	BASE YEAR 1985		PROJECTED YEAR 1995			
		ANNUAL AVERAGE EMPLOYMENT	PERCENT OF TOTAL EMPLOYMENT	ANNUAL AVERAGE EMPLOYMENT	PERCENT OF TOTAL EMPLOYMENT	CHANGE IN EMPLOYMENT 1985-95	PERCENTAGE CHANGE 1985-95
91302700	PUNCHING MACH. SETTER/OPER., M/P	2,470	0.12	2,370	0.10	-100	-4.0%
91305699	PRESS, BRAKE MACH. SETTER/OP., M/P	2,460	0.12	2,390	0.10	-70	-2.8%
91308703	SHEAR, SLITTER MACH. SET/OP., M/P	800	0.04	790	0.03	-10	-1.2%
91311692	EXTRUDING MACH. SETTER/OPER., M/P	400	0.02	380	0.01	-20	-5.0%
91314701	ROLLING MACHINE SETTER/OPER., M/P	230	0.01	210	0.00	-20	-8.6%
91317693	FORGING MACHINE SETTER/OPER., M/P	130	0.00	130	0.00	0	0.0%
91321696	MACHINE FORMING OPERATORS, M/P	5,240	0.26	5,060	0.22	-180	-3.4%
91502686	NUMERICAL CONTROL MACH. TOOL, M/P	2,010	0.10	2,460	0.11	450	22.3%
91505689	COMBINATION MACH. TOOL SET/OP, M/P	1,670	0.08	2,070	0.09	400	23.9%
91508688	COMBINATION MACH. TOOL OPER., M/P	950	0.04	1,160	0.05	210	22.1%
91700704	METAL FABRICATING SETTERS & OPER	8,630	0.43	9,870	0.44	1,240	14.3%
91702709	WELDING MACHINE SETTER/OPERATOR	3,030	0.15	3,510	0.15	480	15.8%
91705708	WELDING MACHINE OPERATORS	3,550	0.17	4,020	0.18	470	13.2%
91708707	SOLDERING, BRAZING MACH. SET/OP.	310	0.01	350	0.01	40	12.9%
91711706	SOLDERING, BRAZING MACHINE OPER.	410	0.02	450	0.02	40	9.7%
91714705	STRUCTURAL METAL FABRICATORS	1,330	0.06	1,540	0.06	210	15.7%
91900710	METAL & PLASTIC PROCESS. MACH. SET	9,750	0.49	10,890	0.49	1,140	11.6%
91902723	PLASTIC MOLDING, CASTING SET/OP.	1,020	0.05	1,190	0.05	170	16.6%
91905722	PLASTIC MOLDING, CASTING OPER.	3,770	0.19	4,380	0.19	610	16.1%
91908719	METAL MOLDING, CASTING SETTER/OP.	940	0.04	980	0.04	40	4.2%
91911718	METAL MOLDING, CASTING OPERATOR	960	0.04	1,020	0.04	60	6.2%
91914713	FOUNDRY MOLD ASSEMBLY/SHAKEOUT	330	0.01	340	0.01	10	3.0%
91917712	ELECTROLYTIC PLATING SET/OP., M/P	330	0.01	360	0.01	30	9.0%
91921711	ELECTROLYTIC PLATING OPER., M/P	740	0.03	840	0.03	100	13.5%
91923721	Nonelectrolytic plating set., M/P	80	0.00	90	0.00	10	12.5%
91926720	Nonelectrolytic plating oper. M/P	110	0.00	120	0.00	10	9.0%
91928716	HEATING EQUIP. SETTER/OPER. M/P	120	0.00	130	0.00	10	8.3%
91932717	HEAT TREATING, TEMPERING MACH. OP.	590	0.02	630	0.02	40	6.7%
91935714	FURNACE OPERATORS AND TENDERS	730	0.03	760	0.03	30	4.1%
91938715	HEATERS, METAL AND PLASTIC	40	0.00	50	0.00	10	25.0%
92100000	ALL OTHER MET. & PLAS. MACH. SET/OPS	3,550	0.17	3,730	0.16	180	5.0%
92100724	ALL OTHER MET. & PLAS. MACH. SET/OPS	130	0.00	140	0.00	10	7.6%
92197725	ALL OTHER METAL/PLASTIC SETTERS	2,060	0.10	2,120	0.09	60	2.9%
92198726	ALL OTHER METAL/PLASTIC OPERATOR	1,360	0.06	1,470	0.06	110	8.0%
92300755	WOODWORKING MACHINE SETTERS, OP.	3,980	0.20	4,050	0.18	70	1.7%
92302758	SAWING MACHINE SETTER/OPERATOR	200	0.01	210	0.00	10	5.0%
92305756	HEAD SAWYERS	230	0.01	240	0.01	10	4.3%
92308757	SAWING MACHINE OPERATOR/TENDER	1,470	0.07	1,500	0.06	30	2.0%
92311760	WOODWORKING MACHINE SETTER/OPER.	680	0.03	670	0.03	-10	-1.4%
92314759	WOODWORKING MACHINE OPERATORS	1,400	0.07	1,430	0.06	30	2.1%
92500727	PRINTING, BINDING, & RELATED OCC	11,700	0.59	13,020	0.58	1,320	11.2%
92510735	PRINTING PRESS MACHINE SETTER/OP	560	0.02	600	0.02	40	7.1%

TABLE 14

WISCONSIN OCCUPATIONAL GROWTH PROJECTIONS
 EMPLOYMENT BY OCCUPATION, 1985 PROJECTED TO 1995
 (Continued)

OCCUPATION CODE	OCCUPATION TITLE	BASE YEAR 1985		PROJECTED YEAR 1995		CHANGE IN EMPLOYMENT 1985-95	PERCENTAGE CHANGE 1985-95
		ANNUAL AVERAGE EMPLOYMENT	PERCENT OF TOTAL EMPLOYMENT	ANNUAL AVERAGE EMPLOYMENT	PERCENT OF TOTAL EMPLOYMENT		
92512732	OFFSET LITHOGRAPHIC PRESS SETTER	1,720	0.08	1,970	0.08	250	14.5%
92515731	LETTERPRESS SETTER/OPERATOR	460	0.02	470	0.02	10	2.1%
92519734	ALL OTHER PRINTING PRESS SET/OP.	170	0.00	200	0.00	30	17.6%
92521737	PHOTOENGRAVING & LITH. PHOTOGRA.	580	0.02	690	0.03	110	18.9%
92522741	SPECIALTY MATERIALS PRINTING	150	0.00	150	0.00	0	0.0%
92524738	SCREEN PRINTING MACH. SETTER/OP.	470	0.02	510	0.02	40	8.5%
92525729	BINDERY MACHINE SETTER/OPERATOR	860	0.04	1,010	0.04	150	17.4%
92529743	ALL OTHER PRINTING SETTER/OPER.	270	0.01	300	0.01	30	11.1%
92541739	TYPESETTING MACH. OPERATOR/TEND.	720	0.03	830	0.03	110	15.2%
92543733	PRINTING PRESS MACHINE OPERATOR	3,830	0.19	4,090	0.18	260	6.7%
92545736	PHOTOENGRAVING & LITHOG. OPER.	60	0.00	60	0.00	0	0.0%
92546728	BINDERY MACHINE OPERATORS	1,150	0.05	1,310	0.05	160	13.9%
92599740	ALL OTHER PRINTING, BINDING, REL	690	0.03	830	0.03	140	20.2%
92700744	TEXTILE SETTERS, SET-UP OPERATOR	11,090	0.56	11,110	0.50	20	0.1%
92702754	TEXTILE MACHINE SETTER/OPERATOR	90	0.00	70	0.00	-20	-22.2%
92705753	TEXTILE MACHINE OPERATORS	630	0.03	510	0.02	-120	-19.0%
92708745	EXTRUDING MACH. OPERATOR, FIBERS	120	0.00	130	0.00	10	8.3%
92711752	TEXTILE DRAW-OUT MACH. OPERATOR	20	0.00	10	0.00	-10	-50.0%
92714751	TEXTILE DYEING MACHINE OPERATOR	40	0.00	30	0.00	-10	-25.0%
92717748	SEWING MACH. OPERATOR, GARMENT	3,760	0.19	3,410	0.15	-350	-9.3%
92721749	SEWING MACH. OPER., NON-GARMENT	1,780	0.09	1,710	0.07	-70	-3.9%
92723750	SHOE SEWING MACHINE OPERATOR	710	0.03	540	0.02	-170	-23.9%
92726746	LAUNDRY, DRYCLEANING MACH. OPER.	2,650	0.13	3,180	0.14	530	20.0%
92728747	PRESSING MACH. OPERATOR, TEXTILES	1,300	0.06	1,520	0.06	220	16.9%
92900761	OTHER MACHINE SETTERS, OPERATORS	49,610	2.50	52,010	2.35	2,400	4.8%
92902770	ELECTRONIC SEMICONDUCTOR	280	0.01	310	0.01	30	10.7%
92905773	MOTION PICTURE PROJECTIONISTS	280	0.01	320	0.01	40	14.2%
92908778	PHOTOGRAPHIC PROCESSING MACH. OP.	790	0.03	840	0.03	50	6.3%
92911781	TIRE BUILDING MACHINE OPERATOR	240	0.01	240	0.01	0	0.0%
92914777	PAPER GOODS MACHINE SETTER/OPER.	3,790	0.19	3,900	0.17	110	2.9%
92917766	COOKING MACHINE OPER., FOOD/TOB.	370	0.01	380	0.01	10	2.7%
92921779	ROASTING, DRYING OPER., FOOD/TOB.	600	0.03	600	0.02	0	0.0%
92923772	FURNACE, KILN, OVEN, KETTLE OPER.	330	0.01	250	0.01	-80	-24.2%
92926762	LOW PRESSURE BOILER OPERATOR	690	0.03	730	0.03	40	5.7%
92928784	COOLING, FREEZING EQUIP. OPER.	130	0.00	130	0.00	0	0.0%
92932769	DAIRY PROCESSING EQUIP. OPERATOR	2,370	0.11	2,550	0.11	180	7.5%
92935764	CHEMICAL EQUIP. CONTROLLER/OPER.	570	0.02	590	0.02	20	3.5%
92938765	CHEMICAL EQUIPMENT TENDER	380	0.01	390	0.01	10	2.6%
92941786	CUTTING AND SLICING SETTER/OPER.	450	0.02	420	0.01	-30	-6.6%
92944768	CUTTING & SLICING MACHINE OPER.	2,260	0.11	2,310	0.10	50	2.2%
92947776	PAINTERS, TRANSPORTATION EQUIP.	520	0.02	490	0.02	-30	-5.7%
92951788	COATING, PAINTING SETTER/OPER.	1,420	0.07	1,510	0.06	90	6.3%

TABLE 14

WISCONSIN OCCUPATIONAL GROWTH PROJECTIONS
 EMPLOYMENT BY OCCUPATION, 1985 PROJECTED TO 1995
 (Continued)

OCCUPATION CODE	OCCUPATION TITLE	BASE YEAR 1985		PROJECTED YEAR 1995			
		ANNUAL AVERAGE EMPLOYMENT	PERCENT OF TOTAL EMPLOYMENT	ANNUAL AVERAGE EMPLOYMENT	PERCENT OF TOTAL EMPLOYMENT	CHANGE IN EMPLOYMENT 1985-95	PERCENTAGE CHANGE 1985-95
92953775	COATING, PAINTING MACH. OPER.	2,570	0.12	2,750	0.12	180	7.0%
92956763	CEMENTING & GLUING MACHINE OPER.	1,160	0.05	1,150	0.05	-10	-0.8%
92958783	CLEANING, PICKLING EQUIP. OPER.	870	0.04	900	0.04	30	3.4%
92962780	SEPARATING, FILTERING MACH. OP.	760	0.03	770	0.03	10	1.3%
92965767	CRUSHING & MIXING MACHINE OPER.	3,460	0.17	3,600	0.16	140	4.0%
92968787	EXTRUDING, FORMING SETTER/OPER.	550	0.02	590	0.02	40	7.2%
92971771	EXTRUDING & FORMING OPERATOR	2,460	0.12	2,620	0.11	160	6.5%
92974774	PACKAGING & FILLING MACHINE OPER	8,240	0.41	8,590	0.38	350	4.2%
92997785	ALL OTHER MACHINE SETTERS/OPER.	1,600	0.08	1,710	0.07	110	6.8%
92998782	ALL OTHER MACHINE OPERATORS	12,470	0.63	13,390	0.60	920	7.3%
93000789	HAND WORKING OCC., INC.ASEMBLER	83,140	4.20	90,150	4.07	7,010	8.4%
93100790	PRECISION ASSEMBLERS	8,830	0.44	10,020	0.45	1,190	13.4%
93105795	MACHINE BUILDERS	4,030	0.20	4,720	0.21	690	17.1%
93108794	STRUCTURAL METAL FITTERS	260	0.01	300	0.01	40	15.3%
93111793	ELECTROMECHANICAL EQ. ASSEMBLER	1,020	0.05	1,140	0.05	120	11.7%
93114792	ELECTRICAL, ELECTRONIC ASSEMBLER	3,010	0.15	3,260	0.14	250	8.3%
93117796	WATCH, CHRONOMETER ASSEMBLERS	130	0.00	150	0.00	20	15.3%
93197797	ALL OTHER PREC. ASSEMBLER, METAL	390	0.01	450	0.02	60	15.3%
93900798	OTHER HAND WORKERS & ASSEMBLERS	70,040	3.53	75,520	3.41	5,480	7.8%
93902804	MACHINE ASSEMBLERS	7,430	0.37	8,360	0.37	930	12.5%
93905802	ELECTRICAL, ELECTRONIC ASSEMBLER	4,330	0.21	4,630	0.20	300	6.9%
93908800	COIL WINDERS, TAPERS, FINISHERS	1,870	0.09	2,040	0.09	170	9.0%
93911803	GLAZIER, MANUFACTURING	200	0.01	200	0.00	0	0.0%
93914812	WELDERS AND CUTTERS	5,860	0.29	6,270	0.28	410	6.9%
93917819	SOLDERERS AND BRAZERS	850	0.04	930	0.04	80	9.4%
93921810	PRESSERS, HAND	50	0.00	60	0.00	10	20.0%
93923811	SEWERS, HAND	150	0.00	130	0.00	-20	-13.3%
93926801	CUTTERS AND TRIMMERS, HAND	720	0.03	730	0.03	10	1.3%
93928809	PORTABLE MACHINE CUTTERS	220	0.01	190	0.00	-30	-13.6%
93932816	CARPET CUTTERS, DIAGRAMMERS	80	0.00	90	0.00	10	12.5%
93935799	CANNERY WORKERS	2,660	0.13	2,510	0.11	-150	-5.6%
93938805	MEAT, POULTRY, FISH CUTTERS	2,350	0.11	2,370	0.10	20	0.8%
93944807	MOLDERS AND CASTERS, HAND	220	0.01	230	0.01	10	4.5%
93947808	PAINTING AND COATING, HAND	360	0.01	400	0.01	40	11.1%
93948106	METAL POURERS, BASIC SHAPES	670	0.03	650	0.02	-20	-2.9%
93951817	ENGRAVING AND PRINTING, HAND	40	0.00	40	0.00	0	0.0%
93953818	GRINDING AND POLISHING, HAND	2,330	0.11	2,440	0.11	110	4.7%
93956813	ALL OTHER ASSEMBLERS, FABRICATOR	30,450	1.53	32,850	1.48	2,400	7.8%
93999815	ALL OTHER HAND WORKERS	9,200	0.46	10,410	0.47	1,210	13.1%
95000820	PLANT & SYSTEM OCCUPATIONS	4,270	0.21	4,610	0.20	340	7.9%
95002827	WATER & WASTE TREAT. PLANT OPER.	1,810	0.09	1,990	0.09	180	9.9%
95005829	GAS PLANT OPERATORS	40	0.00	40	0.00	0	0.0%

TABLE 14

WISCONSIN OCCUPATIONAL GROWTH PROJECTIONS
EMPLOYMENT BY OCCUPATION, 1985 PROJECTED TO 1995
(Continued)

OCCUPATION CODE	OCCUPATION TITLE	BASE YEAR 1985		PROJECTED YEAR 1995			
		ANNUAL AVERAGE EMPLOYMENT	PERCENT OF TOTAL EMPLOYMENT	ANNUAL AVERAGE EMPLOYMENT	PERCENT OF TOTAL EMPLOYMENT	CHANGE IN EMPLOYMENT 1985-95	PERCENTAGE CHANGE 1985-95
95008822	CHEMICAL PLANT AND SYSTEM OPER.	50	0.00	50	0.00	0	0.0%
895011830	PETROLEUM PUMP SYSTEM OPERATORS	*	*. **	*	*. **	*	*. **
95014824	PETROLEUM REFINERY OPERATORS	10	0.00	10	0.00	0	0.0%
95017823	GAUGERS	20	0.00	20	0.00	0	0.0%
95021831	POWER GENERATING PLANT OPERATOR	600	0.03	640	0.02	40	6.6%
95023821	AUXILIARY EQUIP. OPER., POWER	210	0.01	210	0.00	0	0.0%
95026832	POWER REACTOR OPERATORS	80	0.00	90	0.00	10	12.5%
95028825	POWER DISTRIBUTORS & DISPATCHERS	270	0.01	290	0.01	20	7.4%
95032826	STATIONARY ENGINEERS	450	0.02	470	0.02	20	4.4%
95099828	ALL OTHER PLANT AND SYSTEM OCC.	740	0.03	800	0.03	60	8.1%
97000833	TRANSP. & MAT. MOVING MACH. OPER.	92,490	4.67	99,150	4.48	6,660	7.2%
97100835	MOTOR VEHICLE OPERATORS	61,150	3.09	67,180	3.03	6,030	9.8%
97102843	TRUCK DRIVERS, HEAVY	28,190	1.42	30,360	1.37	2,170	7.6%
97105842	TRUCK DRIVERS, LIGHT	15,630	0.79	17,570	0.79	1,940	12.4%
97108837	BUS DRIVERS	2,640	0.13	2,920	0.13	280	10.6%
97111838	BUS DRIVERS, SCHOOL	8,540	0.43	9,480	0.42	940	11.0%
97114839	TAXI DRIVERS AND CHAUFFEURS	730	0.03	790	0.03	60	8.2%
97117841	DRIVER/SALES WORKERS	4,460	0.22	4,950	0.22	490	10.9%
97199886	ALL OTHER MOTOR VEHICLE OPERATOR	970	0.04	1,110	0.05	140	14.4%
97300844	RAIL TRANSPORTATION WORKERS	2,180	0.11	2,370	0.10	190	8.7%
97302848	RAILROAD CONDUCTORS, YARDMASTERS	560	0.02	620	0.02	60	10.7%
97305845	LOCOMOTIVE ENGINEERS	360	0.01	430	0.01	70	19.4%
97308849	RAIL YARD ENGINEERS, DINKEY OPER.	130	0.00	150	0.00	20	15.3%
97311846	LOCOMOTIVE FIRERS	180	0.00	180	0.00	0	0.0%
97317847	RAILROAD BRAKE, SIGNAL, SWITCH	910	0.04	960	0.04	50	5.4%
97399888	ALL OTHER RAIL VEHICLE OPERATORS	30	0.00	30	0.00	0	0.0%
97500851	WATER TRANSPORTATION	980	0.04	1,080	0.04	100	10.2%
97502852	CAPTAINS, WATER VESSEL	60	0.00	70	0.00	10	16.6%
97504853	MATES AND ABLE SEAMEN	160	0.00	170	0.00	10	6.2%
97508857	SHIP PILOTS	50	0.00	60	0.00	10	20.0%
97511884	MOTORBOAT OPERATORS	30	0.00	30	0.00	0	0.0%
97514855	ABLE SEAMEN	10	0.00	10	0.00	0	0.0%
97517856	ORDINARY SEAMEN & MARINE OILERS	170	0.00	180	0.00	10	5.8%
97521858	SHIP ENGINEERS	100	0.00	110	0.00	10	10.0%
97702834	AIRCRAFT PILOTS, FLIGHT ENGINEERS	400	0.02	460	0.02	60	15.0%
97800859	ALL OTHER TRANSPORTATION WORKERS	7,560	0.38	8,390	0.37	830	10.9%
97802876	BRIDGE, LOCK, LIGHTHOUSE TENDERS	180	0.00	190	0.00	10	5.5%
97805861	SERVICE STATION ATTENDANTS	5,680	0.28	6,320	0.28	640	11.2%
97808860	PARKING LOT ATTENDANTS	20	0.00	30	0.00	10	50.0%
97899889	ALL OTHER TRANSPORTATION WORKERS	1,680	0.08	1,850	0.08	170	10.1%
97900862	MATERIAL MOVING EQUIPMENT OPER.	18,830	0.95	18,200	0.82	-630	-3.3%
97902882	LONGSHORE EQUIPMENT OPERATORS	30	0.00	30	0.00	0	0.0%

TABLE 14

WISCONSIN OCCUPATIONAL GROWTH PROJECTIONS
 EMPLOYMENT BY OCCUPATION, 1985 PROJECTED TO 1995
 (Continued)

OCCUPATION CODE	OCCUPATION TITLE	BASE YEAR 1985		PROJECTED YEAR 1995			
		ANNUAL AVERAGE EMPLOYMENT	PERCENT OF TOTAL EMPLOYMENT	ANNUAL AVERAGE EMPLOYMENT	PERCENT OF TOTAL EMPLOYMENT	CHANGE IN EMPLOYMENT 1985-95	PERCENTAGE CHANGE 1985-95
97914883	MAIN LINE STATION ENGINEERS	10	0.00	10	0.00	0	0.0%
97917881	GAS PUMPING STATION OPERATORS	10	0.00	10	0.00	0	0.0%
97923879	EXCAVATION LOADING MACHINE OPER.	750	0.03	790	0.03	40	5.3%
97926877	DRAGLINE OPERATORS	50	0.00	50	0.00	0	0.0%
97928878	DREDGE OPERATORS, DIPPER TENDERS	10	0.00	10	0.00	0	0.0%
97938871	GRADER, DOZER, SCRAPER OPERATORS	750	0.03	820	0.03	70	9.3%
97941866	HOIST AND WINCH OPERATORS	210	0.01	220	0.00	10	4.7%
97944865	CRANE AND TOWER OPERATORS	970	0.04	1,050	0.04	80	8.2%
97947867	INDUSTRIAL TRUCK & TRACTOR OPER.	12,030	0.60	10,800	0.48	-1,230	-10.2%
97951863	CONVEYOR OPERATORS AND TENDERS	940	0.04	1,040	0.04	100	10.6%
97953885	PUMP OPERATORS	150	0.00	150	0.00	0	0.0%
97956870	OPERATING ENGINEERS	2,930	0.14	3,230	0.14	300	10.2%
97989875	ALL OTHER TRANSP. & MAT. MOVING	1,790	0.09	1,950	0.08	160	8.9%
97999887	ALL OTHER MATERIAL MOVING OPER.	1,790	0.09	1,950	0.08	160	8.9%
98000890	HELPER, LABORER, MAT.MOVER, HAND	82,290	4.15	87,840	3.97	5,550	6.7%
98102908	MECHANIC AND REPAIRER HELPERS	2,210	0.11	2,480	0.11	270	12.2%
98300000	CONSTRUCTION TRADES HELPERS	12,460	0.62	13,540	0.61	1,080	8.6%
98311892	HELPERS, MASONS & TILE SETTERS	920	0.04	990	0.04	70	7.6%
98312893	HELPERS, CARPENTERS	1,330	0.06	1,460	0.06	130	9.7%
98313894	HELPERS, ELECTRICIANS	220	0.01	240	0.01	20	9.0%
98314895	HELPERS, PAINTERS, PLASTERERS	290	0.01	310	0.01	20	6.8%
98315896	HELPERS, PLUMBERS, PIPEFITTERS	390	0.01	430	0.01	40	10.2%
98316897	HELPERS, ROOFERS	200	0.01	210	0.00	10	5.0%
98319898	HELPERS, ALL OTHER CONSTRUCTION	610	0.03	630	0.02	20	3.2%
98323899	HELPERS, EXTRACTIVE WORKERS	*	*,**	*	*,**	*	*,**
98502900	MACHINE FEEDERS AND OFFBEARERS	8,510	0.43	9,270	0.41	760	8.9%
98700901	HAND FREIGHT, STOCK, MAT. MOVERS	16,510	0.83	17,720	0.80	1,210	7.3%
98702909	STEVEDORES, EXC. EQUIPMENT OPER.	100	0.00	110	0.00	10	10.0%
98705902	REFUSE COLLECTORS	2,540	0.12	2,850	0.12	310	12.2%
98799903	ALL OTHER HAND MATERIAL MOVERS	13,870	0.70	14,760	0.66	890	6.4%
98900904	ALL OTHER HELPER, LABORER, MOVER	51,110	2.58	54,100	2.44	2,990	5.8%
98902905	HAND PACKERS AND PACKAGERS	15,310	0.77	16,810	0.75	1,500	9.7%
98905906	VEHICLE, EQUIPMENT CLEANERS	3,220	0.16	3,650	0.16	430	13.3%
98999907	ALL OTHER HELPER, LABORER, MOVER	32,580	1.64	33,650	1.52	1,070	3.2%

TABLE 15

WISCONSIN OCCUPATIONAL OPENINGS PROJECTIONS
 AVERAGE ANNUAL OPENINGS DUE TO INDUSTRY GROWTH AND LABOR FORCE SEPARATIONS 1985 TO 1995

OCCUPATION CODE	OCCUPATION TITLE	OPENINGS DUE TO GROWTH	OPENINGS DUE TO SEPARATIONS	OPENINGS PER OCCUPATION
TOTAL - ALL OCCUPATIONS		23,389	67,594	90,983
TOTAL - MANAGERIAL AND MGT, RELATED OCC.		1,698	5,358	7,056
13002015	FINANCIAL MANAGERS	179	365	544
13005021	PERSONNEL, TRAINING, LABOR REL. MGR	31	86	117
13008023	PURCHASING MANAGERS	74	165	239
13011018	MARKETING, ADV., PUBLIC REL. MGRS	78	182	260
13014010	ADMINISTRATIVE SERVICES MANAGER	32	111	143
13017014	ENGLISH, MATH., NAT. SCI. MGR.	10	50	60
15002007	POSTMASTERS, MAIL SUPERINTENDENT	14	75	89
15005013	EDUCATION ADMINISTRATORS	40	165	205
15008019	MEDICINE AND HEALTH SERV. MGRS	38	80	118
15011022	PROPERTY, REAL ESTATE MANAGEMENT	4	26	30
15014017	INDUSTRIAL PRODUCTION MANAGERS	19	133	152
15017012	CONSTRUCTION MANAGERS	23	110	133
15021020	MINING AND RELATED MANAGERS	-1	5	4
15023011	COMMUNICATION, TRANSP., UTIL. MGRS	22	116	138
15026006	FOOD SERVICE & LODGING MANAGERS	73	231	304
19002008	PUBLIC ADMIN., LEG., GEN. ADMIN.	48	393	441
19005016	GENERAL MANAGERS AND TOP EXEC.	668	2,292	2,960
19999009	ALL OTHER MANAGERS & ADMINIST.	346	773	1,119

TABLE 15

WISCONSIN OCCUPATIONAL OPENINGS PROJECTIONS
 AVERAGE ANNUAL OPENINGS DUE TO INDUSTRY GROWTH AND LABOR FORCE SEPARATIONS 1985 TO 1995
 (Continued)

OCCUPATION CODE	OCCUPATION TITLE	OPENINGS DUE TO GROWTH	OPENINGS DUE TO SEPARATIONS	OPENINGS PER OCCUPATION
TOTAL - PROFESSIONAL, PARAPROFESS.,TECH.		5,734	10,456	16,190
21102041	UNDERWRITERS	36	36	72
21105044	CREDIT ANALYSTS	17	29	46
21108046	LOAN OFFICERS AND COUNSELORS	29	61	90
21111040	TAX PREPARERS	1	14	15
21114025	ACCOUNTANTS AND AUDITORS	346	438	784
21117043	BUDGET ANALYSTS	8	32	40
21199049	ALL OTHER FINANCIAL SPECIALISTS	16	44	60
21302038	WHOLESALE, RETAIL BUYERS,EX.FARM	43	180	223
21305048	PURCHASING AGENTS & BUYERS, F.FIRM	8	49	57
21308037	PURCHASING AGENT EX.WHO/RET/FARM	36	99	135
21502032	CLAIMS TAKERS, UNEMPLOY.BENEFITS	-1	3	2
21505035	SPECIAL AGENTS, INSURANCE	7	9	16
21508033	EMPLOYMENT INTERVIEWERS	14	69	83
21511034	PERSONNEL,TRAIN.,LABOR REL. SPEC	43	66	109
21902030	COST ESTIMATORS	35	44	79
21905047	MANAGEMENT ANALYSTS	3	15	18
21908029	CONSTRUCTION, BUILDING INSPECTOR	7	43	50
21911028	COMPLIANCE & ENFORCE. INSPECTORS	9	57	66
21914039	TAX EXAMINER,COLLECTOR,REV.AGENT	-2	32	30
21917026	ASSESSORS	11	41	52
21921027	CLAIMS EXAMINERS, INSURANCE	6	13	19
21999042	ALL OTHER MANAGEMENT SUPPORT OCC	99	77	176
22102052	AERONAUTICAL & ASTRO. ENGINEERS	0	0	0
22105058	METALLURGISTS AND REL. ENGINEERS	3	6	9
22108059	MINING ENGINEERS, INC. SAFETY	0	1	1
22114053	CHEMICAL ENGINEERS	6	9	15
22117060	NUCLEAR ENGINEERS	0	2	2
22121054	CIVIL ENGINEERS, INCL. TRAFFIC	31	51	82
22123065	AGRICULTURAL ENGINEERS	1	1	2
22126055	ELECTRICAL & ELECTRONIC ENGINEER	120	91	211
22128056	INDUSTRIAL ENGINEERS,EXC. SAFETY	48	65	113
22132063	SAFETY ENGINEERS, EXCEPT MINING	5	8	13
22135057	MECHANICAL ENGINEERS	107	176	283
22138067	MARINE ENGINEERS	1	1	2
22199064	ALL OTHER ENGINEERS	46	73	119
22301069	ARCHITECTS, INCL. LANDSCAPE ARCH	3	5	8
22302070	ARCHITECTS, EXC. LAND. & MARINE	15	29	44
22305066	MARINE ARCHITECTS	0	0	0
22308071	LANDSCAPE ARCHITECTS	1	2	3
22311073	SURVEYING AND MAPPING SCIENTISTS	7	11	18
22502212	CIVIL ENGINEERING TECHNICIANS	15	35	50
22505213	ELECTRICAL & ELECTRONIC TECHNS.	104	43	147
22508214	INDUSTRIAL ENGINEERING TECHN.	9	9	18
22511215	MECHANICAL ENGINEERING TECHN.	13	19	32

TABLE 15

WISCONSIN OCCUPATIONAL OPENINGS PROJECTIONS
AVERAGE ANNUAL OPENINGS DUE TO INDUSTRY GROWTH AND LABOR FORCE SEPARATIONS 1985 TO 1995
(Continued)

OCCUPATION CODE	OCCUPATION TITLE	OPENINGS DUE TO GROWTH	OPENINGS DUE TO SEPARATIONS	OPENINGS PER OCCUPATION
22514218	DRAFTERS	78	110	188
22517219	ESTIMATORS & DRAFTERS, UTILITIES	1	2	3
22521074	SURVEYING AND MAPPING TECHNICIAN	13	7	20
22599216	ALL OTHER ENGINEERING TECHN.	70	84	154
24102091	PHYSICISTS AND ASTRONOMERS	0	0	0
24105088	CHEMISTS	8	20	28
24108090	METEOROLOGISTS	0	0	0
24111089	GEOLOGIST, GEOPHYSICIST, OCEANOGR.	1	1	2
24199092	ALL OTHER PHYSICAL SCIENTISTS	14	39	53
24302080	FORESTER, CONSERVATION SCIENTIST	4	12	16
24305078	AGRICULTURAL AND FOOD SCIENTISTS	7	9	16
24308079	BIOLOGICAL SCIENTISTS	5	3	8
24311081	MEDICAL SCIENTISTS	4	1	5
24399082	ALL OTHER LIFE SCIENTISTS	20	32	52
24502223	BIOLOGICAL, AGRIC., FOOD TECHN.	2	11	13
24505224	CHEMICAL TECHNICIANS, EXC. HEALTH	5	16	21
24511221	PETROLEUM TECHNICIANS & TECHNOL.	0	0	0
24599222	ALL OTHER SCIENCE TECHNICIANS	21	16	37
25102076	COMPUTER SYSTEMS ANALYSTS, EDP	141	19	160
25105232	COMPUTER PROGRAMMERS	96	31	127
25108231	COMPUTER PROGRAMMER AIDES	17	7	24
25111240	PROGRAMMERS: NUMERICAL, TOOL	5	3	8
25302252	OPERATIONS AND SYSTEMS ANALYSTS	5	12	17
25312085	STATISTICIANS	1	5	6
25313084	ACTUARIES	11	1	12
25315045	FINANCIAL ANALYSTS, STATISTICAL	5	14	19
25319086	MATHEMATICIANS, ALL OTH. MATH. SCI	3	9	12
25323225	MATHEMATICAL TECHNICIANS	2	2	4
27102094	ECONOMISTS, MARKET ANALYSTS	2	5	7
27105097	URBAN AND REGIONAL PLANNERS	1	2	3
27108095	PSYCHOLOGISTS	18	25	43
27199098	ALL OTHER SOCIAL SCIENTISTS	4	8	12
27302104	SOCIAL WORKER, MED. & PSYCHIATRIC	60	92	152
27305105	SOCIAL WORKERS, EX. MED. & PSYCH.	50	108	158
27308419	SOCIAL SERVICE TECHNICIANS	40	62	102
27311102	RECREATION WORKERS	52	133	185
27502100	CLERGY	5	23	28
27505101	DIRECTORS, RELIGIOUS ACTIV./EDUC.	93	410	503
27599248	ALL OTHER RELIGIOUS WORKERS	1	4	5
28102109	JUDGES AND MAGISTRATES	4	55	59
28105108	ADJUDICATORS & HEARING OFFICERS	0	2	2
28108110	LAWYERS	113	308	421
28302234	LAW CLERKS	-2	23	21
28305235	PARALEGAL PERSONNEL	33	43	76
28308238	TITLE SEARCHERS	4	13	17
28311237	TITLE EXAMINERS AND ABSTRACTORS	6	18	24

TABLE 15

WISCONSIN OCCUPATIONAL OPENINGS PROJECTIONS
 AVERAGE ANNUAL OPENINGS DUE TO INDUSTRY GROWTH AND LABOR FORCE SEPARATIONS 1985 TO 1995
 (Continued)

OCCUPATION CODE	OCCUPATION TITLE	OPENINGS DUE TO GROWTH	OPENINGS DUE TO SEPARATIONS	OPENINGS PER OCCUPATION
28399239	ALL OTHER LEGAL ASSISTANTS	8	35	43
31111122	LECTURERS	6	11	17
31114143	NURSING INSTRUCTORS	12	40	52
31117137	GRADUATE ASSISTANTS, TEACHING	-9	97	88
31202129	LIFE SCIENCE TEACHERS	16	60	76
31204124	CHEMISTRY TEACHERS	4	13	17
31206131	PHYSICS TEACHERS	2	9	11
31209133	ALL OTHER PHYS. SCIENCE TEACHERS	1	5	6
31210132	SOCIAL SCIENCE TEACHERS	15	59	74
31212128	HEALTH SPECIALTIES TEACHERS	4	13	17
31216127	ENGLISH & FOREIGN LANG. TEACHERS	12	43	55
31218123	ART, DRAMA, AND MUSIC TEACHERS	11	43	54
31222126	ENGINEERING TEACHERS	8	29	37
31224130	MATHEMATICAL SCIENCE TEACHERS	7	28	35
31226125	COMPUTER SCIENCE TEACHERS	3	10	13
31299134	ALL OTHER POST SECONDARY TEACHER	45	173	218
31302113	TEACHERS, PRESCHOOL & KINDERGARTN	72	57	129
31305114	TEACHERS, ELEMENTARY	242	703	945
31308117	TEACHERS, SECONDARY SCHOOL	182	601	783
31311144	TEACHERS, SPECIAL EDUCATION	65	190	255
31314140	TEACHERS, VOCATIONAL EDUCATION	45	167	212
31317138	INSTRUCTORS, ADULT NONVOC. EDUC.	89	162	251
31321139	INSTRUCTORS AND COACHES, SPORTS	70	176	246
31323136	FARM & HOME MANAGEMENT ADVISORS	0	24	24
31399141	ALL OTHER TEACHERS, INSTRUCTORS	84	206	290
31502148	LIBRARIANS, PROFESSIONAL	27	164	191
31505242	TECHNICAL ASSISTANTS, LIBRARY	13	78	91
31508146	AUDIO-VISUAL SPECIALISTS	2	12	14
31511147	CURATORS, ARCHIVISTS, MUSEUM TECH	1	5	6
31514149	COUNSELORS	29	42	71
31517142	INSTRUCTIONAL COORDINATORS	9	32	41
31521365	TEACHERS AIDES, PARAPROFESSIONAL	57	229	286
32102159	PHYSICIANS AND SURGEONS	115	399	514
32105152	DENTISTS	34	141	175
32108155	OPTOMETRISTS	10	35	45
32111157	PODIATRISTS	0	13	13
32114169	VETERINARIANS, VET. INSPECTORS	9	16	25
32199151	CHIROPRACTORS	-1	23	22
32302165	RESPIRATORY THERAPISTS	22	4	26
32305162	OCCUPATIONAL THERAPISTS	16	13	29
32308163	PHYSICAL THERAPISTS	25	12	37
32311168	CORRECT. & MANUAL ARTS THERAPIST	1	0	1
32314166	SPEECH PATHOLOGISTS, AUDIOLOGISTS	12	10	22
32317164	RECREATION THERAPISTS	5	11	16
32399167	ALL OTHER THERAPISTS	5	14	19
32502160	REGISTERED NURSES	867	762	1,629

TABLE 15

WISCONSIN OCCUPATIONAL OPENINGS PROJECTIONS
AVERAGE ANNUAL OPENINGS DUE TO INDUSTRY GROWTH AND LABOR FORCE SEPARATIONS 1985 TO 1995
(Continued)

OCCUPATION CODE	OCCUPATION TITLE	OPENINGS DUE TO GROWTH	OPENINGS DUE TO SEPARATIONS	OPENINGS PER OCCUPATION
32505198	LICENSED PRACTICAL NURSES	190	250	440
32508197	EMERGENCY MEDICAL TECHNICIANS	21	36	57
32511158	PHYSICIAN ASSISTANTS	13	24	37
32514154	OPTICIANS, DISPENSING & MEASUR.	5	21	26
32517156	PHARMACISTS	46	101	147
32521153	DIETITIANS AND NUTRITIONISTS	15	34	49
32523194	DIETETIC TECHNICIANS	6	15	21
32902201	MED./CLINICAL LAB. TECHNOLOGISTS	30	36	66
32905200	MED./CLINICAL LAB. TECHNICIANS	19	18	37
32908193	DENTAL HYGIENISTS	41	23	64
32911202	MEDICAL RECORDS TECHN.& TECHNOL.	30	28	58
32914204	NUCLEAR MEDICINE TECHNOLOGISTS	4	2	6
32917206	RADIOLOGIC TECHNOLOGISTS	18	10	28
32921205	RADIOLOGIC TECHNICIANS	27	16	43
32923196	ELECTROENCEPHALOGRAPH TECHN.	3	2	5
32926195	ELECTROCARDIOGRAPH TECHNICIANS	8	5	13
32928207	SURGICAL TECHNICIANS	24	16	40
32999208	ALL OTHER HEALTH PROF., PARA, TECH	109	100	209
34002190	WRITERS AND EDITORS	58	167	225
34005189	TECHNICAL WRITERS	3	8	11
34008183	PUBLIC RELATIONS SPECIALISTS	44	68	112
34011187	REPORTERS AND CORRESPONDENTS	27	66	93
34014186	BROADCAST NEWS ANALYSTS	0	7	7
34017185	ANNOUNCERS, RADIO AND TV	0	9	9
34021249	ANNOUNCERS, OTHER	0	0	0
34023181	PHOTOGRAPHERS	20	23	43
34026180	CAMERA OPERATORS, TV & MOVIES	2	3	5
34028229	BROADCAST TECHNICIANS	2	6	8
34032250	FILM EDITORS	0	1	1
34035171	ARTISTS AND COMMERCIAL ARTISTS	29	36	65
34038174	DESIGNERS, EXC. INTERIOR DESIGN.	28	59	87
34041251	INTERIOR DESIGNERS	13	27	40
34044175	MERCHANDISE DISPLAYERS	6	16	22
34047177	MUSIC DIRECTORS, SINGERS, & REL.	2	5	7
34051178	MUSICIANS, INSTRUMENTAL	15	34	49
34053173	DANCERS AND CHOREOGRAPHERS	2	1	3
34056182	PRODUCERS, ACTORS, ENTERTAINERS	5	3	8
34058172	ATHLETE, COACH, UMPIRE & RELATED	14	12	26
39002228	AIR TRAFFIC CONTROLLERS	2	4	6
39005246	TRAFFIC TECHNICIANS	0	0	0
39008241	RADIO OPERATORS	0	2	2
39011245	FUNERAL DIRECTORS AND MORTICIANS	13	42	55
39014244	EMBALMERS	2	2	4
39099243	ALL OTHER TECHNICIANS	0	0	0
39999247	ALL OTHER PROF., PARAPROF., TECHN.	257	261	518

TABLE 15

WISCONSIN OCCUPATIONAL OPENINGS PROJECTIONS
 AVERAGE ANNUAL OPENINGS DUE TO INDUSTRY GROWTH AND LABOR FORCE SEPARATIONS 1985 TO 1995
 (Continued)

OCCUPATION CODE	OCCUPATION TITLE	OPENINGS DUE TO GROWTH	OPENINGS DUE TO SEPARATIONS	OPENINGS PER OCCUPATION
	TOTAL - SALES AND RELATED OCCUPATIONS	2,960	8,256	11,216
41002268	FIRST LINE SUPERVISORS, SALES	148	440	588
43002256	INSURANCE SALES WORKERS	77	215	292
43005258	BROKERS, REAL ESTATE	10	30	40
43008259	SALES AGENTS, REAL ESTATE	6	18	24
43011260	REAL ESTATE APPRAISERS	8	24	32
43014262	SECURITIES, FINANCIAL SERV.SALES	44	76	120
43017271	SALES AGENTS, BUSINESS SERVICES	27	62	89
43021264	TRAVEL AGENTS	7	83	90
43023270	SALES AGENTS, ADVERTISING	26	62	88
43099266	ALL OTHER SERVICE SALES OCC.	16	44	60
49002272	SALES ENGINEERS	13	54	67
49005274	SALES REPS, SCIENTIF.PROD.EXC.RET	99	374	473
49008269	SALES REPS.EXC.SCIENITIF & RETAIL	281	901	1,182
49011261	SALESPERSONS, RETAIL	804	3,263	4,067
49014273	SALESPERSONS, PARTS	88	119	207
49017255	COUNTER AND RENTAL CLERKS	48	138	186
49021263	STOCK CLERKS, SALES FLOOR	173	1,054	1,227
49023254	CASHIERS	962	992	1,954
49026275	VENDORS, SOLICITORS, DOOR-TO-DOOR	36	83	119
49032267	DEMONSTRATORS, PROMOTERS, MODELS	2	12	14
49999265	ALL OTHER SALES & RELATED OCC.	85	212	297

TABLE 15

WISCONSIN OCCUPATIONAL OPENINGS PROJECTIONS
AVERAGE ANNUAL OPENINGS DUE TO INDUSTRY GROWTH AND LABOR FORCE SEPARATIONS 1985 TO 1995
(Continued)

OCCUPATION CODE	OCCUPATION TITLE	OPENINGS DUE TO GROWTH	OPENINGS DUE TO SEPARATIONS	OPENINGS PER OCCUPATION
TOTAL - CLERICAL & ADMIN. SUPPORT OCC.		2,633	10,094	12,727
51002369	FIRST LINE SUPERVISORS, CLERICAL	189	428	617
53102366	TELLERS	98	135	233
53105309	NEW ACCOUNTS CLERKS	28	65	93
53108299	TRANSIT CLERKS	9	14	23
53111372	LOAN INTERVIEWERS	2	3	5
53114352	CREDIT AUTHORIZERS	2	6	8
53117353	CREDIT CHECKERS	12	16	28
53121358	LOAN AND CREDIT CLERKS	43	80	123
53123278	ADJUSTMENT CLERKS	34	61	95
53126340	STATEMENT CLERKS	15	23	38
53128335	BROKERAGE CLERKS	1	7	8
53302280	INSURANCE ADJUSTERS, INVESTIGATOR	60	47	107
53305281	INSURANCE APPRAISERS, AUTO DAMAG	4	4	8
53308283	INSURANCE EXAMINING CLERKS	0	0	0
53311282	INSURANCE CLAIMS CLERKS	15	22	37
53314284	INSURANCE POLICY PROCESS. CLERKS	31	97	128
53502286	WELFARE ELIGIBILITY WORKERS	7	16	23
53505371	INVESTIGATORS, CLERICAL	1	1	2
53508279	BILL AND ACCOUNT COLLECTORS	26	51	77
53702351	COURT CLERKS	9	18	27
53705359	MUNICIPAL CLERKS	10	36	46
53708285	LICENSE CLERKS	1	4	5
53802313	TRAVEL CLERKS	3	3	6
53805312	RESERVATION & TRANS. TICKET AGENT	2	12	14
53808308	HOTEL DESK CLERKS	20	46	66
53902337	LIBRARY ASSISTANTS & BOOKMOBILE	18	56	74
53904363	TEACHER AIDES & EDUC. ASSISTANTS	78	140	218
53908334	ADVERTISING CLERKS	3	5	8
53911360	PROOFREADERS AND COPY MARKERS	9	24	33
53914361	REAL-ESTATE CLERKS	6	14	20
55102343	LEGAL SECRETARIES	69	113	182
55105344	MEDICAL SECRETARIES	70	104	174
55199345	ALL OTHER SECRETARIES	653	1,471	2,124
55302346	STENOGRAPHERS	105	98	7
55305310	RECEPTIONISTS, INFORMATION CLERKS	87	295	382
55307347	TYPISTS	49	337	288
55311349	TYPISTS, WORD PROCESSING EQUIP.	78	113	191
55314339	PERSONNEL CLERKS, EXCEPT PAYROLL	24	44	68
55317368	CORRESPONDENCE CLERKS	10	12	22
55321336	FILE CLERKS	25	109	84
55323338	ORDER CLERKS: MATERIALS, SERVICE	65	122	187
55326325	PROCUREMENT CLERKS	9	29	38
55328362	STATISTICAL CLERKS	7	16	9
55332370	INTERVIEWING CLERKS, EX. PERSONNEL	28	59	87

TABLE 15

WISCONSIN OCCUPATIONAL OPENINGS PROJECTIONS
 AVERAGE ANNUAL OPENINGS DUE TO INDUSTRY GROWTH AND LABOR FORCE SEPARATIONS 1985 TO 1995
 (Continued)

OCCUPATION CODE	OCCUPATION TITLE	OPENINGS DUE TO GROWTH	OPENINGS DUE TO SEPARATIONS	OPENINGS PER OCCUPATION
5535354	CUSTOMER SERVICE REPS, UTILITIES	15	39	54
55338305	BOOKKEEPING & ACCOUNTING CLERKS	243	1,615	1,858
55341306	PAYROLL AND TIMEKEEPING CLERKS	-28	123	95
55344303	BILLING, COST AND RATE CLERKS	61	127	188
55347357	GENERAL OFFICE CLERKS	270	1,737	2,007
56002304	BILL., POST, CALCULATING MACH.OP	19	24	43
56005298	DUPLICATING MACHINE OPERATORS	-2	4	2
56008301	MAIL MACHINE OPERATORS	8	20	28
56011295	COMPUTER OPERATORS, EXC. PERIPH.	79	32	111
56014296	PERIPHERAL EDP EQUIP. OPERATORS	15	14	29
56017355	DATA ENTRY KEYERS, EX. COMPOSING	-102	73	-29
56021356	DATA ENTRY KEYERS, COMPOSING	18	7	25
56099300	ALL OTHER OFFICE MACH. OPERATORS	9	32	41
57102291	SWITCHBOARD OPERATORS	65	141	206
57105290	DIRECTORY ASSISTANCE OPERATORS	-2	12	10
57108289	CENTRAL OFFICE OPERATORS	-1	4	3
57111292	TELEGRAPH AND TELETYPE OPERATORS	0	1	1
57199293	ALL OTHER COMMUNICATION OPERATOR	0	2	2
57302315	MAIL CLERKS, EXC. MAIL MACHINE	2	53	55
57305317	POSTAL MAIL CARRIERS	52	153	205
57308318	POSTAL SERVICE CLERKS	5	104	109
57311316	MESSENGERS	6	44	50
58002322	DISPATCHER:POLICE,FIRE,AMBULANCE	12	35	47
58005321	DISPATCHERS: EXC. POL.,FIRE,AMB.	19	46	65
58008326	PACKAGING, EXPEDITING CLERKS	12	112	124
58011329	TRANSPORTATION AGENTS	1	3	4
58014323	METER READERS, UTILITIES	2	25	27
58017330	WEIGHERS, MEASURERS, CHECKERS	3	15	18
58021332	MARKING CLERKS	19	41	60
58023327	STOCK CLERKS:STOCKROOM OR WAREH.	-20	384	364
58026324	ORDER FILLERS, SALES	-6	95	89
58028328	TRAFFIC, SHIPPING, & REC. CLERKS	86	329	415
58099331	ALL OTHER MATERIAL WORKERS	28	54	82
59999367	ALL OTHER CLERICAL & ADM.SUPPORT	102	238	340

TABLE 15

WISCONSIN OCCUPATIONAL OPENINGS PROJECTIONS
AVERAGE ANNUAL OPENINGS DUE TO INDUSTRY GROWTH AND LABOR FORCE SEPARATIONS 1985 TO 1995
(Continued)

OCCUPATION CODE	OCCUPATION TITLE	OPENINGS DUE TO GROWTH	OPENINGS DUE TO SEPARATIONS	OPENINGS PER OCCUPATION
TOTAL - SERVICE OCCUPATIONS		5,385	14,752	20,137
61002433	FIRE FIGHTING & PREV.SUPERVISORS	12	22	34
61005438	POLICE AND DETECTIVE SUPERVISORS	13	28	41
61008457	HOUSEKEEPERS, INSTITUTIONAL	31	295	326
61099466	ALL OTHER SERVICE SUPERVISORS	108	293	401
62021423	COOKS, PRIVATE HOUSEHOLD	1	1	2
62031424	HOUSEKEEPERS AND BUTLERS	2	2	4
62041425	CHILD CARE WKRS., PVT. HOUSEHOLD	15	20	35
62061426	CLEANERS & SERVANTS, PVT. HOUSE.	11	132	143
63001434	FIRE INSPECTORS	1	4	5
63005436	FOREST FIRE INSPECT & PREVENTION	1	3	4
63008432	FIRE FIGHTERS	64	64	128
63011441	POLICE DETECTIVES	7	12	19
63014442	POLICE PATROL OFFICERS	71	80	151
63017430	CORRECTION OFFICERS AND JAILERS	59	53	112
63021446	PARKING ENFORCEMENT OFFICERS	3	6	9
63023444	BAILIFFS	2	8	10
63028440	CRIMINAL INVESTIGATORS, FEDERAL	1	1	2
63031447	SHERIFFS,DEPUTIES,U.S. MARSHALLS	3	45	48
63035452	PRIVATE DETECTIVE & INVESTIGATOR	8	46	54
63038455	RAILROAD POLICE & SPECIAL AGENTS	0	1	1
63041445	FISH AND GAME WARDENS	1	7	8
63044451	CROSSING GUARDS	9	176	185
63047453	GUARDS AND WATCH GUARDS	102	771	873
63099454	ALL OTHER PROTECTIVE SERVICE	15	17	32
65002391	HOSTS & HOSTESSES: REST., LOUNGE	65	117	182
65005381	BARTENDERS	541	1,283	1,824
65008392	WAITERS AND WAITRESSES	730	609	1,339
65011395	FOOD SERVERS, OUTSIDE	31	17	48
65014388	DINING ROOM & BARTENDER HELPERS	145	188	333
65017394	COUNTER ATTENDANTS	64	50	114
65021380	BAKERS, BREAD AND PASTRY	56	158	214
65023628	BUTCHERS AND MEAT CUTTERS	52	176	228
65026384	COOKS, RESTAURANT	213	471	684
65028383	COOKS, INSTITUTION OR CAFETERIA	124	361	485
65032387	COOKS, SPECIALTY FAST FOOD	120	408	528
65035386	COOKS, SHORT ORDER	42	39	81
65038390	FOOD PREPARATION WORKERS	306	895	1,201
65041389	COMB. FOOD PREPARATION, SERVICE	114	442	556
65099393	ALL OTHER FOOD SERVICE WORKERS	108	244	352
66002398	DENTAL ASSISTANTS	73	40	113
66005399	MEDICAL ASSISTANTS	77	55	132
66008401	NURSING AIDES AND ORDERLIES	539	1,266	1,805
66011418	HOME HEALTH AIDES	36	78	114
66014402	PSYCHIATRIC AIDES	16	49	65

TABLE 15

WISCONSIN OCCUPATIONAL OPENINGS PROJECTIONS
 AVERAGE ANNUAL OPENINGS DUE TO INDUSTRY GROWTH AND LABOR FORCE SEPARATIONS 1985 TO 1995
 (Continued)

OCCUPATION CODE	OCCUPATION TITLE	OPENINGS DUE TO GROWTH	OPENINGS DUE TO SEPARATIONS	OPENINGS PER OCCUPATION
66017405	PHYSICAL, CORRECT.THERAPY ASSIST	7	16	23
66021403	OCCUPATIONAL THERAPY ASSISTANTS	3	7	10
66023397	AMBULANCE DRIVERS & ATTENDANTS	3	8	11
66026404	PHARMACY ASSISTANTS	31	33	64
66099465	ALL OTHER HEALTH SERVICE WORKERS	26	105	131
67002377	MAIDS AND HOUSEKEEPING CLEANERS	205	873	1,078
67005376	JANITORS AND CLEANERS, EXC.MAIDS	583	3,146	3,729
67008378	PEST CONTROLLERS AND ASSISTANTS	-2	11	9
67011459	ELEVATOR OPERATORS	0	3	3
67099464	ALL OTHER CLEAN,BUILDING SERVICE	57	466	523
68002409	BARBERS	12	100	112
68005412	HAIRDRESSERS AND COSMETOLOGISTS	226	274	500
68008413	MANICURISTS	2	3	5
68011414	SHAMPOOERS	1	1	2
68014407	AMUSEMENT & RECREATION ATTENDANT	39	47	86
68017416	GUIDES	1	10	11
68021421	USHERS, LOBBY ATT., TICKET TAKER	15	8	23
68023408	BAGGAGE PORTERS AND BELLHOPS	1	9	10
68026415	FLIGHT ATTENDANTS	0	0	0
68028462	TRANSPORTATION ATTENDANTS	0	0	0
68032463	WARDROBE & DRESS.ROOM ATTENDANTS	1	3	4
68035420	SOCIAL WELFARE SERVICE AIDES	4	13	17
68038410	CHILD CARE WORKERS	18	70	88
68041461	FUNERAL ATTENDANTS	4	12	16
69999458	ALL OTHER SERVICE WORKERS	156	501	657

TABLE 15

WISCONSIN OCCUPATIONAL OPENINGS PROJECTIONS
 AVERAGE ANNUAL OPENINGS DUE TO INDUSTRY GROWTH AND LABOR FORCE SEPARATIONS 1985 TO 1995
 (Continued)

OCCUPATION CODE	OCCUPATION TITLE	OPENINGS DUE TO GROWTH	OPENINGS DUE TO SEPARATIONS	OPENINGS PER OCCUPATION
TOTAL - AGRICULTURE, FORESTRY, FISHING		192	818	1,010
71002480	FARMERS	0	3	3
71005481	FARM MANAGERS	0	3	3
72002469	FIRST LINE SUPERV. AG., ETC.	4	24	28
73002489	FALLERS AND BUCKERS	0	24	24
73005488	CHOKE SETTERS	0	1	1
73008493	LOG HANDLING EQUIPMENT OPERATORS	1	11	12
73011491	LOGGING TRACTOR OPERATORS	1	8	9
73099494	ALL OTHER TIMBER CUTTING WORKERS	0	1	1
74002477	FARM WORKERS	22	24	46
77005484	FISHERS, HUNTERS, AND TRAPPERS	0	0	0
79002490	FOREST AND CONSERVATION WORKERS	3	45	48
79005478	NURSERY WORKERS	4	12	16
79008492	LOG GRADERS AND SCALERS	0	3	3
79011475	GRADERS & SORTERS, AGRIC.PRODUCT	3	15	18
79014474	GARDENERS AND GROUNDSKEEPERS	127	574	701
79017473	ANIMAL CARETAKERS, EXCEPT FARM	15	14	29
79021496	FARM EQUIPMENT OPERATORS	0	11	11
79999495	ALL OTHER AGRIC., FOREST, FISH.	12	45	57

TABLE 15

WISCONSIN OCCUPATIONAL OPENINGS PROJECTIONS
 AVERAGE ANNUAL OPENINGS DUE TO INDUSTRY GROWTH AND LABOR FORCE SEPARATIONS 1985 TO 1995
 (Continued)

OCCUPATION CODE	OCCUPATION TITLE	OPENINGS DUE TO GROWTH	OPENINGS DUE TO SEPARATIONS	OPENINGS PER OCCUPATION
TOTAL - PRODUCTION, OPER., MAINTENANCE		4,787	17,860	22,647
81002501	FIRST LINE SUPERV.:MECH.& REPAIR	71	224	295
81005499	FIRST LINE SUPERV.:CONST.EXTRAC.	24	101	125
81008502	FIRST LINE SUPERV.: PRODUCTION	103	564	667
81011503	FIRST LINE SUPERV.: TRANSPORT.	14	46	60
81017500	FIRST LINE SUPERV.:HELP,LABORERS	4	6	10
81099504	ALL OTHER FIRST LINE SUPERVISORS	23	55	78
83002669	INSPECTORS, TESTERS, AND GRADERS	71	160	231
83004670	OTHER INSPECTORS, TESTER, GRADER	5	9	14
83005671	PRODUCTION INSPECTORS, GRADERS	42	310	352
83008672	TRANSPORTATION INSPECTORS	1	7	8
83099673	ALL OTHER INSPECTORS, TESTERS	4	9	13
85112580	MACHINERY MECHANICS:TEXTILE MACH	-3	3	0
85113579	MACHINERY MECHANICS: SEWING MACH	-1	2	1
85116578	MACHINERY MECHANICS:MARINE EQUIP	0	1	1
85118581	MACHINERY MECHANICS: PLANT	6	22	28
85119583	ALL OTHER MACHINERY MECHANICS	45	151	196
85123586	MILLWRIGHTS	17	68	85
85126542	REFRACTORY MATERIAL REPAIRERS	0	1	1
85128584	MACHINERY MAINTENANCE WORKERS	9	56	65
85132585	MAINTENANCE REPAIRERS, GEN.UTIL.	270	734	1,004
85301592	AUTO AND MOTORCYCLE MECHANICS	0	1	1
85302593	AUTOMOTIVE MECHANICS	191	302	493
85305591	AUTOMOTIVE BODY,RELATED REPAIRER	74	76	150
85308594	MOTORCYCLE REPAIRERS	4	4	8
85311595	BUS, TRUCK, DIESEL ENG. MECHANIC	78	123	201
85314597	MOBILE HEAVY EQUIPMENT MECHANICS	10	22	32
85317598	RAIL CAR REPAIRERS	3	9	12
85320588	AIRCRAFT MECHANICS & ENGIN.SPEC.	0	0	0
85321596	FARM EQUIPMENT MECHANICS	24	82	106
85323590	AIRCRAFT MECHANICS	3	4	7
85326589	AIRCRAFT ENGINE SPECIALISTS	0	2	2
85328599	SMALL ENGINE SPECIALISTS	13	13	26
85502561	CENTRAL OFFICE & PBX INSTAL/RPR.	15	44	59
85505562	FRAME WIRERS, CENTRAL OFFICE	-1	3	2
85511564	SIGNAL OR TRACK SWITCH MAINT.	1	5	6
85514563	RADIO MECHANICS	0	0	0
85599565	ALL OTHER COMMUN.EQUIP.MECHANICS-	1	1	2
85702575	TELEPHONE & CABLE TV INSTAL/RPR.	1	45	46
85705568	DATA PROCESSING EQUIP. REPAIRERS	18	4	22
85708572	HOME ENTERTAINMENT EQ. REPAIRERS	10	37	47
85711607	ELECTR. HOME APPL. & POWER TOOL	13	38	51
85714571	ELECTRIC MOTOR REPAIRERS	3	18	21
85717573	ELECTRONICS REPAIRERS,COMM.&IND.	1	4	5
85721622	POWERHOUSE & RELAY ELECTRICIANS	2	10	12

TABLE 15

WISCONSIN OCCUPATIONAL OPENINGS PROJECTIONS
AVERAGE ANNUAL OPENINGS DUE TO INDUSTRY GROWTH AND LABOR FORCE SEPARATIONS 1985 TO 1995
(Continued)

OCCUPATION CODE	OCCUPATION TITLE	OPENINGS DUE TO GROWTH	OPENINGS DUE TO SEPARATIONS	OPENINGS PER OCCUPATION
85723570	ELECTRICAL POWERLINE INSTAL/RPR.	-22	32	10
85726574	TELEPH. STATION INSTALL.& REPAIR	-7	5	-2
85728569	ELECTRICAL INSTALLERS & REPAIRER	3	13	16
85799623	ALL OTHER ELECTRIC.,ELECTRO.MECH	6	27	33
85902605	HEATING, A/C, REFRIG. MECHANICS	42	124	166
85905615	PRECISION INSTRUMENT REPAIRERS	9	58	67
85908604	ELECTROMEDICAL & BIOMED. REPAIR.	4	17	21
85911603	ELECTRIC METER INSTALLERS/REPAIR	3	19	22
85914620	CAMERA & PHOTOGRAPHIC REPAIRERS	1	6	7
85917618	WATCHMAKERS	0	8	8
85921613	MUSICAL INSTRUMENT REPAIR & TUNE	1	7	8
85923609	LOCKSMITHS AND SAFE REPAIRERS	1	4	5
85926614	OFFICE MACHINE,REGISTER SERVICER	16	19	35
85928610	MECHANICAL CONTROL INSTALLERS	4	33	37
85932621	ELEVATOR INSTALLERS & REPAIRERS	2	2	4
85935616	RIGGERS	1	2	3
85938612	MOBILE HOME REPAIRERS	3	10	13
85944608	GAS APPLIANCE REPAIRERS	5	19	24
85947602	COIN & VENDING MACHINE SERVICERS	7	22	29
85951601	BICYCLE REPAIRERS	1	6	7
85953617	TIRE REPAIRERS AND CHANGERS	19	61	80
85956611	MENDERS, GARMENTS AND LINENS	3	13	16
85999619	ALL OTHER MECHANICS, INSTALLERS	53	146	199
87102512	CARPENTERS	111	465	576
87105514	CEILING TILE INSTALLERS	2	8	10
87108517	DRYWALL INSTALLERS	6	2	8
87111518	TAPERS	3	1	4
87114519	LATHERS	1	1	2
87202520	ELECTRICIANS	85	211	296
87302508	BRICK MASONS	19	49	68
87305509	STONE MASONS	4	6	10
87308523	HARD TILE SETTERS	1	3	4
87311515	CONCRETE AND TERRAZZO FINISHERS	16	30	46
87314535	REINFORCING METAL WORKERS	2	4	6
87317529	PLASTERERS AND STUCCO MASONS	1	8	9
87402526	PAINTERS AND PAPERHANGERS	44	169	213
87502530	PLUMBER, PIPEFITTER, STEAMFITTER	54	177	231
87508527	PIPELAYERS	10	30	40
87511533	SEPTIC TANK, SEWER SERVICERS	0	4	4
87602513	CARPET INSTALLERS	7	7	14
87605538	FLOOR LAYERS,EX.CARPET,WOOD,TILE	2	4	6
87702506	AIR HAMMER OPERATORS	0	1	1
87705541	PILE DRIVING OPERATORS	0	1	1
87708540	PAVING, SURFACING, TAMPING	9	46	55
87711524	HIGHWAY MAINTENANCE WORKERS	10	180	190
87714531	RAIL-TRACK LAYING EQUIP. OPER.	1	9	10

TABLE 15

WISCONSIN OCCUPATIONAL OPENINGS PROJECTIONS
 AVERAGE ANNUAL OPENINGS DUE TO INDUSTRY GROWTH AND LABOR FORCE SEPARATIONS 1985 TO 1995
 (Continued)

OCCUPATION CODE	OCCUPATION TITLE	OPENINGS DUE TO GROWTH	OPENINGS DUE TO SEPARATIONS	OPENINGS PER OCCUPATION
87802525	INSULATION WORKERS	7	7	14
87805543	SHEET METAL DUCT INSTALLERS	0	0	0
87808532	ROOFERS	30	19	49
87811522	GLAZIERS	8	17	25
87814536	STRUCTURAL METAL WORKERS	6	16	22
87817521	FENCE ERECTORS	0	5	5
87899537	ALL OTHER CONSTRUCTION WORKERS	15	66	81
87902554	EARTH DRILLERS, EX. OIL & GAS	1	3	4
87905545	BLASTERS AND EXPLOSIVES WORKERS	0	0	0
87908556	ROCK SPLITTERS, QUARRY	0	1	1
87911550	ROTARY DRILL OPERATORS	0	0	0
87914547	DERRICK OPERATORS, OIL & GAS	0	0	0
87921551	ROUSTABOUTS	0	0	0
87943548	MINE CUTTING MACHINE OPERATORS	0	0	0
87949558	ALL OTHER MINING MACH. OPERATORS	0	0	0
87989553	ALL OTHER EXTRACTIVE OCC., EX. HEL	0	0	0
87999557	ALL OTHER CONSTR. & EXTRACTIVE	17	74	91
89102643	TOOL AND DIE MAKERS	54	223	277
89105636	PRECISION INSTRUMENT MAKERS	6	9	15
89108639	MACHINISTS	73	266	339
89111645	TOOL GRINDERS, FILERS, SHARPENERS	11	43	54
89114640	PATTERN AND MODEL MAKERS, METAL	0	13	13
89117638	PRECISION LAYOUT WORKERS, METAL	3	7	10
89121642	SHIPFITTERS	1	12	13
89123637	JEWELERS AND SILVERSMITHS	4	11	15
89126635	PRECISION HAND WORKERS, JEWELRY	1	3	4
89128634	PRECISION ETCHERS AND ENGRAVERS	1	4	5
89132641	SHEET METAL WORKERS	55	150	205
89135633	BOILERMAKERS	2	9	11
89199644	ALL OTHER PRECISION METAL WORKER	4	1	5
89302664	PATTERN AND MODEL MAKERS, WOOD	2	18	20
89305667	PATTERN MARKERS, WOOD	0	0	0
89308665	WOOD MACHINISTS	7	75	82
89311662	CABINETMAKERS & BENCH CARPENTERS	17	128	145
89314663	FURNITURE FINISHERS	3	12	15
89399666	ALL OTHER PRECISION WOODWORKERS	12	35	47
89502654	PATTERNMAKERS AND LAYOUT WORKERS	-1	2	1
89505653	CUSTOM TAILORS AND SEWERS	20	88	108
89508656	UPHOLSTERERS	2	20	22
89511655	SHOE AND LEATHER WORKERS	-4	45	41
89514660	SPOTTERS, DRY CLEANING	4	12	16
89517659	PRESSERS, DELICATE FABRICS	7	21	28
89521658	PRECISION DYERS	0	1	1
89599657	ALL OTHER PRECISION TEXTILE, APPA	0	1	1
89702648	PRECISION COMPOSITOR, TYPESETTER	2	14	16
89705651	JOB PRINTERS	15	34	49

TABLE 15

WISCONSIN OCCUPATIONAL OPENINGS PROJECTIONS
AVERAGE ANNUAL OPENINGS DUE TO INDUSTRY GROWTH AND LABOR FORCE SEPARATIONS 1985 TO 1995
(Continued)

OCCUPATION CODE	OCCUPATION TITLE	OPENINGS DUE TO GROWTH	OPENINGS DUE TO SEPARATIONS	OPENINGS PER OCCUPATION
89708649	PRECISION LITHOGRAPHERS & PHOTO.	27	39	66
89711647	BOOKBINDERS	4	12	16
89799650	ALL OTHER PRECISION PRINTING	2	4	6
89802629	SLAUGHTERERS AND BUTCHERS	-2	47	45
89805626	BAKERS, MANUFACTURING	0	24	24
89808630	FOOD BATCHMAKERS	-1	43	42
89899631	ALL OTHER PRECISION FOOD, TOBACCO	0	4	4
89902677	FOUNDRY MOLD AND CORE MAKERS	3	27	30
89905678	MOLDERS & SHAPERS, EXC. JEWELRY	1	4	5
89908679	PATTERNMAKERS, MODEL MAKERS	0	0	0
89911676	DETAIL DESIGN DECORATORS & PAINT	2	3	5
89914680	PHOTOGRAPHIC PROCESS WORKERS	4	7	11
89917684	OPTICAL GOODS WORKERS	4	2	6
89921675	DENTAL LABORATORY TECHNICIANS	26	32	58
89923683	MEDICAL APPLIANCE MAKERS	1	2	3
89999681	ALL OTHER PRECISION WORKERS	25	80	105
91102702	SAVING MACH. TOOL SETTER/OP., M/P	-1	12	11
91105695	LATHE, TURNING MACH. SETTER/OP., M/P	-5	78	73
91108691	DRILLING, BORING MACH. SET/OP., M/P	-4	46	42
91111698	MILLING, PLANING MACH. SET/OP., M/P	-2	16	14
91114694	GRINDING, BUFFING MACH. SET/OP., M/P	-12	82	70
91117697	MACHINE TOOL CUTTING OPER., M/P	-19	144	125
91302700	PUNCHING MACH. SETTER/OPER., M/P	-10	60	50
91305699	PRESS, BRAKE MACH. SETTER/OP., M/P	-6	61	55
91308703	SHEAR, SLITTER MACH. SET/OP., M/P	-1	20	19
91311692	EXTRUDING MACH. SETTER/OPER., M/P	-2	6	4
91314701	ROLLING MACHINE SETTER/OPER., M/P	-2	5	3
91317693	FORGING MACHINE SETTER/OPER., M/P	0	3	3
91321696	MACHINE FORMING OPERATORS, M/P	-18	108	90
91502686	NUMERICAL CONTROL MACH. TOOL, M/P	46	61	107
91505689	COMBINATION MACH. TOOL SET/OP., M/P	41	36	77
91508688	COMBINATION MACH. TOOL OPER., M/P	22	21	43
91702709	WELDING MACHINE SETTER/OPERATOR	48	59	107
91705708	WELDING MACHINE OPERATORS	46	68	114
91708707	SOLDERING, BRAZING MACH. SET/OP.	4	8	12
91711706	SOLDERING, BRAZING MACHINE OPER.	5	11	16
91714705	STRUCTURAL METAL FABRICATORS	21	54	75
91902723	PLASTIC MOLDING, CASTING SET/OP.	17	18	35
91905722	PLASTIC MOLDING, CASTING OPER.	62	66	128
91908719	METAL MOLDING, CASTING SETTER/OP.	4	16	20
91911718	METAL MOLDING, CASTING OPERATOR	6	16	22
91914713	FOUNDRY MOLD ASSEMBLY/SHAKEOUT	0	5	5
91917712	ELECTROLYTIC PLATING SET/OP., M/P	3	5	8
91921711	ELECTROLYTIC PLATING OPER., M/P	11	11	22
91923721	NONELECTROLYTIC PLATING SET., M/P	1	1	2
91926720	NONELECTROLYTIC PLATING OPER. M/P	1	2	3

TABLE 15

WISCONSIN OCCUPATIONAL OPENINGS PROJECTIONS
 AVERAGE ANNUAL OPENINGS DUE TO INDUSTRY GROWTH AND LABOR FORCE SEPARATIONS 1985 TO 1995
 (Continued)

OCCUPATION CODE	OCCUPATION TITLE	OPENINGS DUE TO GROWTH	OPENINGS DUE TO SEPARATIONS	OPENINGS PER OCCUPATION
91928716	HEATING EQUIP. SETTER/OPER. M/P	2	3	5
91932717	HEAT TREATING, TEMPERING MACH. OP.	4	12	16
91935714	FURNACE OPERATORS AND TENDERS	3	15	18
91938715	HEATERS, METAL AND PLASTIC	0	1	1
92100724	ALL OTHER MET. & PLAS. MACH. SET/OPS	1	4	5
92197725	ALL OTHER METAL/PLASTIC SETTERS	6	41	47
92198726	ALL OTHER METAL/PLASTIC OPERATOR	11	28	39
92302758	SAWING MACHINE SETTER/OPERATOR	1	6	7
92305756	HEAD SAWYERS	1	7	8
92308757	SAWING MACHINE OPERATOR/TENDER	4	43	47
92311760	WOODWORKING MACHINE SETTER/OPER.	0	32	32
92314759	WOODWORKING MACHINE OPERATORS	3	56	59
92510735	PRINTING PRESS MACHINE SETTER/OP	3	19	22
92512732	OFFSET LITHOGRAPHIC PRESS SETTER	25	33	58
92515731	LETTERPRESS SETTER/OPERATOR	1	8	9
92519734	ALL OTHER PRINTING PRESS SET/OP.	3	3	6
92521737	PHOTOENGRAVING & LITH. PHOTOGRA.	11	13	24
92522741	SPECIALTY MATERIALS PRINTING	0	3	3
92524738	SCREEN PRINTING MACH. SETTER/OP.	4	13	17
92525729	BINDERY MACHINE SETTER/OPERATOR	15	25	40
92529743	ALL OTHER PRINTING SETTER/OPER.	3	8	11
92541739	TYPESETTING MACH. OPERATOR/TEND.	11	27	38
92543733	PRINTING PRESS MACHINE OPERATOR	27	70	97
92545736	PHOTOENGRAVING & LITHOG. OPER.	0	1	1
92546728	BINDERY MACHINE OPERATORS	15	33	48
92599740	ALL OTHER PRINTING, BINDING, REL	14	24	38
92702754	TEXTILE MACHINE SETTER/OPERATOR	-2	2	0
92705753	TEXTILE MACHINE OPERATORS	-12	12	0
92708745	EXTRUDING MACH. OPERATOR, FIBERS	1	4	5
92711752	TEXTILE DRAW-OUT MACH. OPERATOR	0	0	0
92714751	TEXTILE DYEING MACHINE OPERATOR	-1	1	0
92717748	SEWING MACH. OPERATOR, GARMENT	-35	182	147
92721749	SEWING MACH. OPER., NON-GARMENT	-7	88	81
92723750	SHOE SEWING MACHINE OPERATOR	-17	24	7
92726746	LAUNDRY, DRYCLEANING MACH. OPER.	54	178	232
92728747	PRESSING MACH. OPERATOR, TEXTILES	23	76	99
92902770	ELECTRONIC SEMICONDUCTOR	3	6	9
92905773	MOTION PICTURE PROJECTIONISTS	3	13	16
92908778	PHOTOGRAPHIC PROCESSING MACH. OP.	6	15	21
92911781	TIRE BUILDING MACHINE OPERATOR	0	5	5
92914777	PAPER GOODS MACHINE SETTER/OPER.	11	68	79
92917766	COOKING MACHINE OPER., FOOD/TOB.	0	8	8
92921779	ROASTING, DRYING OPER., FOOD/TOB.	0	10	10
92923772	FURNACE, KILN, OVEN, KETTLE OPER.	-8	7	-1
92926762	LOW PRESSURE BOILER OPERATOR	4	33	37
92928784	COOLING, FREEZING EQUIP. OPER.	0	3	3

TABLE 15

WISCONSIN OCCUPATIONAL OPENINGS PROJECTIONS
 AVERAGE ANNUAL OPENINGS DUE TO INDUSTRY GROWTH AND LABOR FORCE SEPARATIONS 1985 TO 1995
 (Continued)

OCCUPATION CODE	OCCUPATION TITLE	OPENINGS DUE TO GROWTH	OPENINGS DUE TO SEPARATIONS	OPENINGS PER OCCUPATION
92932769	DAIRY PROCESSING EQUIP. OPERATOR	18	52	70
92935764	CHEMICAL EQUIP. CONTROLLER/OPER.	2	12	14
92938765	CHEMICAL EQUIPMENT TENDER	1	8	9
92941786	CUTTING AND SLICING SETTER/OPER.	-3	12	9
92944768	CUTTING & SLICING MACHINE OPER.	5	64	69
92947776	PAINTERS, TRANSPORTATION EQUIP.	-4	11	7
92951788	COATING, PAINTING SETTER/OPER.	9	32	41
92953775	COATING, PAINTING MACH. OPER.	18	59	77
92956763	CEMENTING & GLUING MACHINE OPER.	-1	25	24
92958783	CLEANING, PICKLING EQUIP. OPER.	4	36	40
92962780	SEPARATING, FILTERING MACH. OP.	1	24	25
92965767	CRUSHING & MIXING MACHINE OPER.	14	98	112
92968787	EXTRUDING, FORMING SETTER/OPER.	4	8	12
92971771	EXTRUDING & FORMING OPERATOR	16	34	50
92974774	PACKAGING & FILLING MACHINE OPER	35	356	391
92997785	ALL OTHER MACHINE SETTERS/OPER.	11	35	46
92998782	ALL OTHER MACHINE OPERATORS	92	282	374
93105795	MACHINE BUILDERS	69	100	169
93108794	STRUCTURAL METAL FITTERS	4	4	8
93111793	ELECTROMECHANICAL EQ. ASSEMBLER	12	25	37
93114792	ELECTRICAL, ELECTRONIC ASSEMBLER	26	79	105
93117796	WATCH, CHRONOMETER ASSEMBLERS	2	3	5
93197797	ALL OTHER PREC. ASSEMBLER, METAL	6	6	12
93902804	MACHINE ASSEMBLERS	94	181	275
93905802	ELECTRICAL, ELECTRONIC ASSEMBLER	30	103	133
93908800	COIL WINDERS, TAPERS, FINISHERS	17	81	98
93911803	GLAZIER, MANUFACTURING	0	8	8
93914812	WELDERS AND CUTTERS	41	110	151
93917819	SOLDERERS AND BRAZIERERS	8	22	30
93921810	PRESSERS, HAND	1	2	3
93923811	SEWERS, HAND	-2	8	6
93926801	CUTTERS AND TRIMMERS, HAND	1	14	15
93928809	PORTABLE MACHINE CUTTERS	-3	4	1
93932816	CARPET CUTTERS, DIAGRAMMERS	1	2	3
93935799	CANNERY WORKERS	-15	108	93
93938805	MEAT, POULTRY, FISH CUTTERS	2	45	47
93944807	MOLDERS AND CASTERS, HAND	1	4	5
93947808	PAINTING AND COATING, HAND	4	19	23
93948106	METAL POURERS, BASIC SHAPES	-2	21	19
93951817	ENGRAVING AND PRINTING, HAND	0	0	0
93953818	GRINDING AND POLISHING, HAND	11	44	55
93956813	ALL OTHER ASSEMBLERS, FABRICATOR	240	725	965
93999815	ALL OTHER HAND WORKERS	121	408	529
95002827	WATER & WASTE TREAT. PLANT OPER.	17	54	71
95005829	GAS PLANT OPERATORS	0	1	1
95008822	CHEMICAL PLANT AND SYSTEM OPER.	0	1	1

TABLE 15

WISCONSIN OCCUPATIONAL OPENINGS PROJECTIONS
AVERAGE ANNUAL OPENINGS DUE TO INDUSTRY GROWTH AND LABOR FORCE SEPARATIONS 1985 TO 1995
(Continued)

OCCUPATION CODE	OCCUPATION TITLE	OPENINGS DUE TO GROWTH	OPENINGS DUE TO SEPARATIONS	OPENINGS PER OCCUPATION
95011830	PETROLEUM PUMP SYSTEM OPERATORS	0	0	0
95014824	PETROLEUM REFINERY OPERATORS	0	0	0
95017823	GAUGERS	0	0	0
95021831	POWER GENERATING PLANT OPERATOR	4	19	23
95023821	AUXILIARY EQUIP. OPER., POWER	1	6	7
95026832	POWER REACTOR OPERATORS	1	3	4
95028825	POWER DISTRIBUTORS & DISPATCHERS	2	8	10
95032826	STATIONARY ENGINEERS	3	21	24
95099828	ALL OTHER PLANT AND SYSTEM OCC.	6	20	26
97102843	TRUCK DRIVERS, HEAVY	217	711	928
97105842	TRUCK DRIVERS, LIGHT	194	480	674
97108837	BUS DRIVERS	29	133	162
97111838	BUS DRIVERS, SCHOOL	94	431	525
97114839	TAXI DRIVERS AND CHAUFFEURS	6	49	55
97117841	DRIVER/SALES WORKERS	49	101	150
97199886	ALL OTHER MOTOR VEHICLE OPERATOR	14	24	38
97302848	RAILROAD CONDUCTORS, YARDMASTERS	6	21	27
97305845	LOCOMOTIVE ENGINEERS	7	15	22
97308849	RAIL YARD ENGINEERS, DINKEY OPER.	1	5	6
97311846	LOCOMOTIVE FIRERS	0	7	7
97317847	RAILROAD BRAKE, SIGNAL, SWITCH	5	23	28
97399888	ALL OTHER RAIL VEHICLE OPERATORS	0	1	1
97502852	CAPTAINS, WATER VESSEL	1	4	5
97504853	MATES AND ABLE SEAMEN	1	5	6
97508857	SHIP PILOTS	0	1	1
97511884	MOTORBOAT OPERATORS	0	0	0
97514855	ABLE SEAMEN	0	0	0
97517856	ORDINARY SEAMEN & MARINE OILERS	1	7	8
97521858	SHIP ENGINEERS	0	1	1
97702834	AIRCRAFT PILOTS, FLIGHT ENGINEERS	6	3	9
97802876	BRIDGE, LOCK, LIGHTHOUSE TENDERS	1	13	14
97805861	SERVICE STATION ATTENDANTS	64	199	263
97808860	PARKING LOT ATTENDANTS	0	3	3
97899889	ALL OTHER TRANSPORTATION WORKERS	18	56	74
97902882	LONGSHORE EQUIPMENT OPERATORS	0	2	2
97914883	MAIN LINE STATION ENGINEERS	0	0	0
97917881	GAS PUMPING STATION OPERATORS	0	0	0
97923879	EXCAVATION LOADING MACHINE OPER.	4	21	25
97926877	DRAGLINE OPERATORS	0	1	1
97928878	DREDGE OPERATORS, DIPPER TENDERS	0	0	0
97938871	GRADER, DOZER, SCRAPER OPERATORS	7	46	53
97941866	HOIST AND WINCH OPERATORS	1	25	26
97944865	CRANE AND TOWER OPERATORS	8	30	38
97947867	INDUSTRIAL TRUCK & TRACTOR OPER.	123	186	63
97951863	CONVEYOR OPERATORS AND TENDERS	10	18	28
97953885	PUMP OPERATORS	0	3	3

TABLE 15

WISCONSIN OCCUPATIONAL OPENINGS PROJECTIONS
 AVERAGE ANNUAL OPENINGS DUE TO INDUSTRY GROWTH AND LABOR FORCE SEPARATIONS 1985 TO 1995
 (Continued)

OCCUPATION CODE	OCCUPATION TITLE	OPENINGS DUE TO GROWTH	OPENINGS DUE TO SEPARATIONS	OPENINGS PER OCCUPATION
97956870	OPERATING ENGINEERS	30	87	117
97999887	ALL OTHER MATERIAL MOVING OPER.	16	34	50
98102908	MECHANIC AND REPAIRER HELPERS	27	73	100
98311892	HELPERS, MASONS & TILE SETTERS	8	13	21
98312893	HELPERS, CARPENTERS	13	19	32
98313894	HELPERS, ELECTRICIANS	2	3	5
98314895	HELPERS, PAINTERS, PLASTERERS	2	4	6
98315896	HELPERS, PLUMBERS, PIPEFITTERS	3	6	9
98316897	HELPERS, ROOFERS	2	3	5
98319898	HELPERS, ALL OTHER CONSTRUCTION	3	7	10
98323899	HELPERS, EXTRACTIVE WORKERS	0	0	0
98502900	MACHINE FEEDERS AND OFFBEARERS	75	254	329
98702909	STEVEDORES, EXC. EQUIPMENT OPER.	1	2	3
98705902	REFUSE COLLECTORS	30	142	172
98799903	ALL OTHER HAND MATERIAL MOVERS	89	196	285
98902905	HAND PACKERS AND PACKAGERS	150	467	617
98905906	VEHICLE, EQUIPMENT CLEANERS	43	68	111
98999907	ALL OTHER HELPER, LABORER, MOVER	107	848	955

TABLE 15

WISCONSIN OCCUPATIONAL OPENINGS PROJECTIONS
 AVERAGE ANNUAL OPENINGS DUE TO INDUSTRY GROWTH AND LABOR FORCE SEPARATIONS 1985 TO 1995
 (Continued)

OCCUPATION CODE	(SUMMARY BY OCCUPATION GROUP)	OPENINGS DUE TO GROWTH	OPENINGS DUE TO SEPARATIONS	OPENINGS PER OCCUPATION
	OCCUPATION TITLE			
	TOTAL - ALL OCCUPATIONS	23,389	67,594	90,983
10000001	MANAGERIAL AND MGT, RELATED OCC.	1,698	5,358	7,056
20000000	PROFESSIONAL, PARAPROFESS.,TECH.	5,734	10,456	16,190
40000253	SALES AND RELATED OCCUPATIONS	2,960	8,256	11,216
50000276	CLERICAL & ADMIN. SUPPORT OCC.	2,633	10,094	12,727
60000373	SERVICE OCCUPATIONS	5,385	14,752	20,137
70000467	AGRICULTURE, FORESTRY, FISHING	192	818	1,010
80000000	PRODUCTION, OPER., MAINTENANCE	4,787	17,860	22,647

CHAPTER 4

Methodology

Creating industrial and occupational projections is a complex task of data collection, processing, and analysis. The process begins with a series of decisions about the geographic, industrial, and occupational detail for which the projections will be produced. These decisions, and the decision as to appropriate base and target years for the projections are made in light of the needs for occupational outlook data of our users. These users include business planners, policy makers, managers of employment and training programs, educational planners, and jobseekers. Though the specific needs of each group vary, most of them have a common need for information about the outlook for the state's overall labor market in the near to short term. Many of these users also need information about industrial and occupational outlooks for specific labor markets in subareas of the state. To this end the Bureau of Labor Market Information has begun to produce both state-wide and substate labor force and industrial and occupational projections for Wisconsin.

This chapter describes the methods used to create these projections and the underlying assumptions. The chapter is divided into two parts: Section A describes the process used to create the industrial and occupational projections; Section B describes the process used to project estimates of the total labor force, employment, and unemployment.

4.A PROJECTING INDUSTRY AND OCCUPATIONAL EMPLOYMENT

The overall process followed in developing industrial and occupational projections for the state and for substate areas is described in Figure 1. The assumptions underlying the projections are provided in Table 16.

Data Sources

As Figure 1 indicates, much of the projections process involves collecting and assembling data about industry employment and occupational staffing patterns. These data come from three basic source. The Current Employment Statistics Program conducted by the Bureau of Labor Market Information in DILHR compiles the basic information about nonfarm wage and salary employment by major industry group for the state. These data provide control totals for the base year industry employment. Additional data on employment by detailed industry groups comes from the ES-202 Wages and Contributions Program. These data are also collected by the Bureau of Labor Market Information in DILHR. Data on occupational staffing patterns are also collected by the Bureau through the Occupational Employment Statistics (OES) Program.

The OES Program is designed to collect data on occupational employment by industry using a three-year recurring cycle of surveys. Data from Manufacturing and hospitals are collected one year, Trade and Transportations, Communications, and Public Utilities in the next, Mining, Construction, Finance, and Services in the last year of the cycle. OES survey collection instruments, tailored to each industry's occupational structure, are limited to a maximum of 200 occupations. The remainder of the employment in each industry is distributed into appropriate residual categories. Occupations that were forced into residual categories due to the 200 occupation limit per industry were treated similarly in all industries. This method increases the size of the residuals, but is considered the most accurate way of treating occupations not fully covered by the survey. By converting the data collected in the three OES surveys to totals for a single base year, the data can then be arrayed to provide a matrix of occupational employment by industry.

The data sources used in developing the industrial and occupational projections includes only nonfarm wage and salary employment. They do not include self-employed and unpaid family workers. Many professionals and managers are self-employed, so these occupations tend to be understated in the projections. The data sources are based on employment reported by employers and so give totals for place-of-work employment. Thus, these data includes information about persons working secondary jobs. About five percent of all workers hold a second job, but secondary job holding is not evenly distributed across occupations. Workers in clerical, craft work and operative occupations hold a smaller than average proportion of secondary jobs. Sales and service workers have traditionally held greater than average numbers of secondary jobs; this trend is increasing.

The other major sources of data used in the the industrial and occupational projections process are the national matrix of occupational employment by industry, the national matrix of change factors, and the national matrix of labor force separation rates. The national matrix is constructed by compiling the data produced by each of the state programs. Data from this matrix is used to supplement the state-level data for industries or occupations for which the state data would be unreliable due to small sample size. The national change factor matrix is used to estimate the rate at which occupational distributions within an industry are likely to change. These estimates are developed by staff in the Bureau of Labor Statistics (BLS) in the U.S. Department of Labor in conjunction with representatives from the trade unions and business, educational, and scientific communities. The national matrix of labor force separation rates is constructed by the BLS staff using information on changes in labor force status and occupation from matched samples of the respondents to the Current Population Survey. This matrix provides information about gross levels of separation rates from specific occupations. These separation rates record the likelihood that someone engaged in a specific occupation will transfer to another occupation or stop working by becoming unemployed or leaving the labor force.

The Projections Process

Analysts in the Bureau of Labor Market Information in DILHR used the base year estimates of nonfarm wage and salary employment and similar historical data for these industries to identify long term trends in employment growth or decline by industry group. Review of these estimates provided three alternative estimates of growth for each industry group. The **high** estimate was calculated by averaging the three highest forecasts advanced by our panel of experts. The **average** estimate was calculated by averaging all of the forecasts developed by the panel. The **low** estimate was calculated by averaging the three lowest forecasts advanced by the review panel.

By applying information on trends in occupational staffing patterns in the state and nation from the OES Program to the average estimate of industrial employment growth analysts the Bureau of Labor Market Information developed the occupational growth projections for the state. By applying information from the national matrix of labor force separation rates, Bureau analysts produced estimates of projected openings in each occupation due to labor force separations. Finally, the entire set of projections were reviewed for consistency and adjusted where needed to take in to account local conditions which may not match with the national assumptions about labor force separation rates or staffing patterns. The occupational projections process produced data for 723 specific occupations or residual groups and 109 summary levels of occupations.

In using the projections it is important to note that the figures reported for average annual growth or openings are of use in comparing projections with the number of workers entering the labor force each year. It should not be assumed, however, that change in the work force occur evenly. Businesses seldom expand or contract at a constant rate. Factors affecting them often cannot be anticipated, and reaction is sporadic. Business cycle fluctuations, beginning or ending

of government programs, sudden changes in monetary and fiscal policy, technological break throughs and natural disasters are only some of the events that can cause abrupt changes in employment. These projections should be considered indicative of trends, and business cycles within the trends may move these trends backward or forward by several years.

FIGURE 1

STEPS IN PROJECTING INDUSTRY AND OCCUPATIONAL EMPLOYMENT

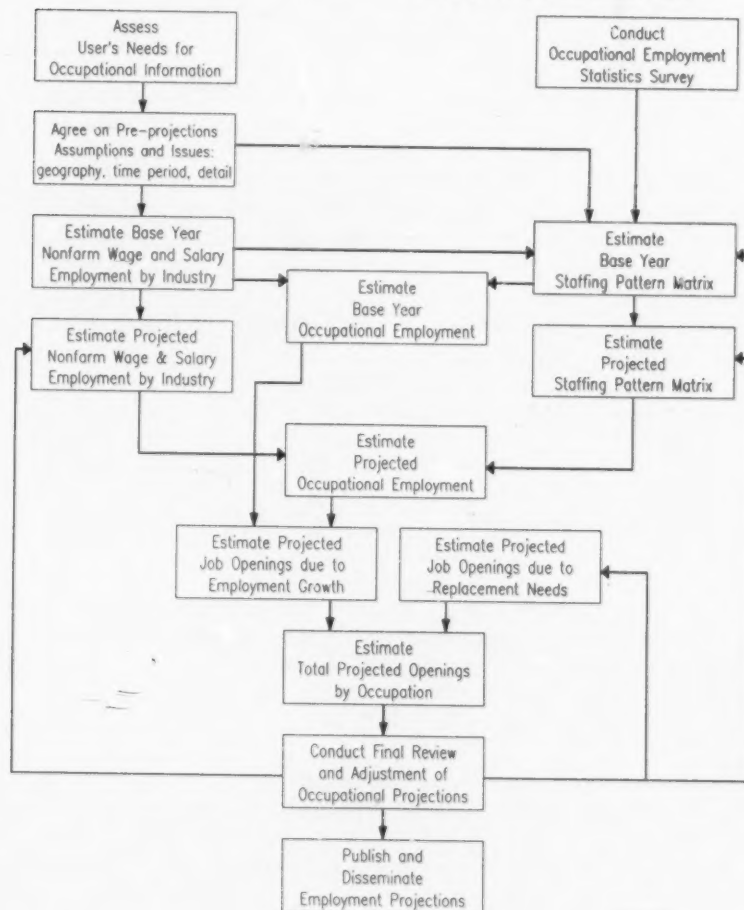


TABLE 16
ASSUMPTIONS

The Wisconsin employment projections are based on the following conditions. Variation from these criteria would alter the projections. These assumptions are similar to the ones used in projecting the United States economy or labor force. There are, however, two notable exceptions, namely the absence of an assumed rate of unemployment and the use of somewhat higher participation rates than those used in national projections. The assumptions are as follows:

1. The United States will not be engaged in any military conflict, but defense expenditures will be sizable.
2. A slowly rising Gross National Product will prevail in the general economy of the late 1980's and early 1990's, fiscal and monetary policies of the federal government will be conservative, and the rate of economic growth will be slower than during the early 1970's.
3. There will be no major changes in the basic institutions in the American economy.
4. The labor force will grow at decreasing rates throughout the late 1980's and early 1990's due to past declines in birth rates.
5. Long-term industry employment trends are generally expected to continue.
6. The trend toward a service-oriented economy from a goods-producing economy is expected to continue.
7. Wisconsin's labor force growth generally parallels that recorded and projected for the nation. A larger percentage of women than previously will enter the labor force and a larger percentage of people will be seeking second jobs.
8. There is no assumed unemployment rate.
9. Ecological considerations will continue to play an important role in the growth of employment, but will be somewhat blunted by budget balancing pressures.
10. Oil prices have stabilized, but the economy has continued to move ahead. The oil cartel shows no immediate signs of regrouping.

4.B. LABOR FORCE PROJECTIONS

The overall process followed in developing the labor force projections for the state is described in Figure 2.

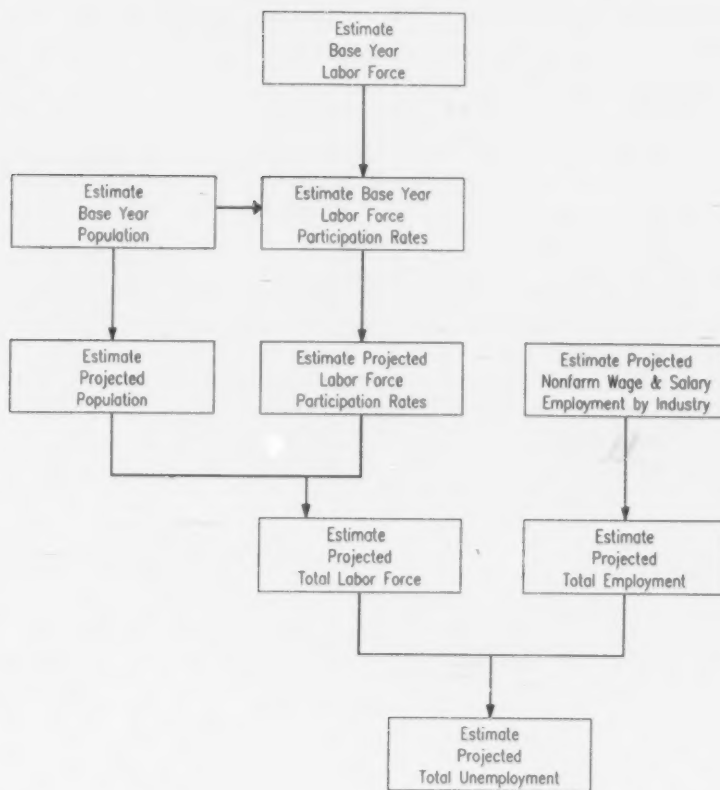
Data Sources

As Figure 2 indicates, there are several sources of data which are required in developing labor force projections and estimates of employment and unemployment. The Demographic Services Center in the Wisconsin Department of Administration provide the base year and related historical population estimates for the state. The Current Population Survey conducted by the U.S. Bureau of the Census for the U. S. Bureau of Labor Statistics provides the base year and historical estimates of the labor force. Together, the two data sets are used to construct base year and historical estimates of labor force participation rates. Finally, the projected estimate of nonfarm wage and salary employment together with historical data on the ratio of total employment to wage employment provide important sources of information to the labor force projections process.

The Projections Process

Analysts in the Bureau of Labor Market Information in DILHR used the base year estimates of labor force participation rates and historical trends to develop projected rates of labor force participation for the target years, 1990 and 1995. Several alternative projections were developed, differing in the rate of growth in labor force participation by women and the rate of decline in labor force participation by men. Applied to the population projections these projected participation rates give a projected estimate for the total labor force. Assuming a constant ratio between nonfarm wage and salary employment and total employment for the state, analysts then calculated total projected employment independently of the labor force projections. The estimate of projected unemployment then was calculated as the residual of the total size of the labor force not accounted for by the projection for total employment.

FIGURE 2
STEPS IN PROJECTING LABOR FORCE ESTIMATES



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7. Projections of the U.S. Labor Force, GNP, Industrial Growth, and Occupations to 1995, Monthly Labor Review, November 1983, Volume 106, Number 11, U.S. Department of Labor, Bureau of Labor Statistics.
8. Wisconsin Labor Force 1954 thru 1985. Average Annual Employment in Thousands, March 1986, DILHR, Employment and Training Policy Division, Labor Market Information Bureau.

APPENDIX A

Alphabetical Index of Occupational Titles

Occupations in this publication are identified both by a title and by an occupational code number. The occupational codes are based on the coding scheme developed by the U.S. Department of Labor for processing data collected through the Occupational Employment Statistics (OES) Program. The OES coding scheme identifies occupations as belonging to one of seven functional groups according to the first digit: (1) managerial and administrative occupations; (2,3) professional, paraprofessional, and technical; (4) sales and sales related; (5) clerical and administrative support; (6) service occupations; (7) agricultural, forestry, and fishing; (8,9) production, operatives, and maintenance occupations.

The following alphabetical listing of occupational categories is provided to help the reader to find information about specific occupations in the tables of projected employment included in the text.

97514855	ABLE SEAMEN
21114025	ACCOUNTANTS AND AUDITORS
25313084	ACTUARIES
28105108	ADJUDICATORS & HEARING OFFICERS
53123278	ADJUSTMENT CLERKS
13014010	ADMINISTRATIVE SERVICES MANAGER
53908334	ADVERTISING CLERKS
22102052	AERONAUTICAL & ASTRO. ENGINEERS
24305078	AGRICULTURAL AND FOOD SCIENTISTS
22123065	AGRICULTURAL ENGINEERS
87702506	AIR HAMMER OPERATORS
39002228	AIR TRAFFIC CONTROLLERS
85326589	AIRCRAFT ENGINE SPECIALISTS
85323590	AIRCRAFT MECHANICS
85320588	AIRCRAFT MECHANICS & ENGIN.SPEC.
97702834	AIRCRAFT PILOTS, FLIGHT ENGINEERS
79999495	ALL OTHER AGRIC., FOREST, FISH.
93956813	ALL OTHER ASSEMBLERS, FABRICATOR
67099464	ALL OTHER CLEAN, BUILDING SERVICE
59999367	ALL OTHER CLERICAL & ADM. SUPPORT
85599565	ALL OTHER COMMUN. EQUIP. MECHANICS
57199293	ALL OTHER COMMUNICATION OPERATOR
87999557	ALL OTHER CONSTR. & EXTRACTIVE
87899537	ALL OTHER CONSTRUCTION WORKERS
85799623	ALL OTHER ELECTRIC., ELECTRO. MECH
22599216	ALL OTHER ENGINEERING TECHN.
22199064	ALL OTHER ENGINEERS
87989553	ALL OTHER EXTRACTIVE OCC., EX. HEL
21199049	ALL OTHER FINANCIAL SPECIALISTS
81099504	ALL OTHER FIRST LINE SUPERVISORS
65099393	ALL OTHER FOOD SERVICE WORKERS
98799903	ALL OTHER HAND MATERIAL MOVERS
93999815	ALL OTHER HAND WORKERS

32999208	ALL OTHER HEALTH PROF., PARA, TECH
66099465	ALL OTHER HEALTH SERVICE WORKERS
98999907	ALL OTHER HELPER, LABORER, MOVER
83099673	ALL OTHER INSPECTORS, TESTERS
28399239	ALL OTHER LEGAL ASSISTANTS
24399082	ALL OTHER LIFE SCIENTISTS
92998782	ALL OTHER MACHINE OPERATORS
92997785	ALL OTHER MACHINE SETTERS/OPER.
85119583	ALL OTHER MACHINERY MECHANICS
21999042	ALL OTHER MANAGEMENT SUPPORT OCC
19999009	ALL OTHER MANAGERS & ADMINIST.
97999887	ALL OTHER MATERIAL MOVING OPER.
58099331	ALL OTHER MATERIAL WORKERS
85999619	ALL OTHER MECHANICS, INSTALLERS
92100724	ALL OTHER MET.&PLAS.MACH.SET/OPS
92198726	ALL OTHER METAL/PLASTIC OPERATOR
92197725	ALL OTHER METAL/PLASTIC SETTERS
87949558	ALL OTHER MINING MACH. OPERATORS
97199886	ALL OTHER MOTOR VEHICLE OPERATOR
56099300	ALL OTHER OFFICE MACH. OPERATORS
31209133	ALL OTHER PHYS. SCIENCE TEACHERS
24199092	ALL OTHER PHYSICAL SCIENTISTS
95099828	ALL OTHER PLANT AND SYSTEM OCC.
31299134	ALL OTHER POST SECONDARY TEACHER
93197797	ALL OTHER PREC. ASSEMBLER, METAL
89899631	ALL OTHER PRECISION FOOD, TOBACCO
89199644	ALL OTHER PRECISION METAL WORKER
89799650	ALL OTHER PRECISION PRINTING
89599657	ALL OTHER PRECISION TEXTILE, APPA
89399666	ALL OTHER PRECISION WOODWORKERS
89999681	ALL OTHER PRECISION WORKERS
92519734	ALL OTHER PRINTING PRESS SET/OP.
92529743	ALL OTHER PRINTING SETTER/OPER.
92599740	ALL OTHER PRINTING, BINDING, REL
39999247	ALL OTHER PROF., PARAPROF., TECHN.
63099454	ALL OTHER PROTECTIVE SERVICE
97399888	ALL OTHER RAIL VEHICLE OPERATORS
27599248	ALL OTHER RELIGIOUS WORKERS
49999265	ALL OTHER SALES & RELATED OCC.
24599222	ALL OTHER SCIENCE TECHNICIANS
55199345	ALL OTHER SECRETARIES
43099266	ALL OTHER SERVICE SALES OCC.
61099466	ALL OTHER SERVICE SUPERVISORS
69999458	ALL OTHER SERVICE WORKERS
27199098	ALL OTHER SOCIAL SCIENTISTS
31399141	ALL OTHER TEACHERS, INSTRUCTORS
39099243	ALL OTHER TECHNICIANS
32399167	ALL OTHER THERAPISTS
73099494	ALL OTHER TIMBER CUTTING WORKERS
97899889	ALL OTHER TRANSPORTATION WORKERS
66023397	AMBULANCE DRIVERS & ATTENDANTS
68014407	AMUSEMENT & RECREATION ATTENDANT
79017473	ANIMAL CARETAKERS, EXCEPT FARM
34021249	ANNOUNCERS, OTHER

34017185	ANNOUNCERS, RADIO AND TV
22302070	ARCHITECTS, EXC. LAND. & MARINE
22301069	ARCHITECTS, INCL. LANDSCAPE ARCH
31218123	ART, DRAMA, AND MUSIC TEACHERS
34035171	ARTISTS AND COMMERCIAL ARTISTS
21917026	ASSESSORS
34058172	ATHLETE, COACH, UMPIRE & RELATED
31508146	AUDIO-VISUAL SPECIALISTS
85301592	AUTO AND MOTORCYCLE MECHANICS
85305591	AUTOMOTIVE BODY,RELATED REPAIRER
85302593	AUTOMOTIVE MECHANICS
95023821	AUXILIARY EQUIP. OPER., POWER
68023408	BAGGAGE PORTERS AND BELLHOPS
63023444	BAILIFFS
65021380	BAKERS, BREAD AND PASTRY
89805626	BAKERS, MANUFACTURING
68002409	BARBERS
65005381	BARTENDERS
85951601	BICYCLE REPAIRERS
53508279	BILL AND ACCOUNT COLLECTORS
56002304	BILL., POST, CALCULATING MACH.OP
55344303	BILLING, COST AND RATE CLERKS
92546728	BINDERY MACHINE OPERATORS
92525729	BINDERY MACHINE SETTER/OPERATOR
24308079	BIOLOGICAL SCIENTISTS
24502223	BIOLOGICAL, AGRIC., FOOD TECHN.
87905545	BLASTERS AND EXPLOSIVES WORKERS
89135633	BOILERMAKERS
89711647	BOOKBINDERS
55338305	BOOKKEEPING & ACCOUNTING CLERKS
87302508	BRICK MASONS
97802876	BRIDGE, LOCK, LIGHTHOUSE TENDERS
34014186	BROADCAST NEWS ANALYSTS
34028229	BROADCAST TECHNICIANS
53128335	BROKERAGE CLERKS
43005258	BROKERS, REAL ESTATE
21117043	BUDGET ANALYSTS
97108837	BUS DRIVERS
97111838	BUS DRIVERS, SCHOOL
85311595	BUS, TRUCK, DIESEL ENG. MECHANIC
65023628	BUTCHERS AND MEAT CUTTERS
89311662	CABINETMAKERS & BENCH CARPENTERS
85914620	CAMERA & PHOTOGRAPHIC REPAIRERS
34026180	CAMERA OPERATORS, TV & MOVIES
93935799	CANNERY WORKERS
97502852	CAPTAINS, WATER VESSEL
87102512	CARPENTERS
93932816	CARPET CUTTERS, DIAGRAMMERS
87602513	CARPET INSTALLERS
49023254	CASHIERS
87105514	CEILING TILE INSTALLERS
92956763	CEMENTING & GLUING MACHINE OPER.
85502561	CENTRAL OFFICE & PBX INSTAL/RPR.
57108289	CENTRAL OFFICE OPERATORS

22114053	CHEMICAL ENGINEERS
92935764	CHEMICAL EQUIP. CONTROLLER/OPER.
92938765	CHEMICAL EQUIPMENT TENDER
95008822	CHEMICAL PLANT AND SYSTEM OPER.
24505224	CHEMICAL TECHNICIANS, EXC.HEALTH
31204124	CHEMISTRY TEACHERS
24105088	CHEMISTS
62041425	CHILD CARE WKRS., PVT. HOUSEHOLD
68038410	CHILD CARE WORKERS
32199151	CHIROPRACTORS
73005488	CHOKE SETTERS
22502212	CIVIL ENGINEERING TECHNICIANS
22121054	CIVIL ENGINEERS, INCL. TRAFFIC
21921027	CLAIMS EXAMINERS, INSURANCE
21502032	CLAIMS TAKERS, UNEMPLOY.BENEFITS
62061426	CLEANERS & SERVANTS, PVT. HOUSE.
92958783	CLEANING, PICKLING EQUIP. OPER.
27502100	CLERGY
92953775	COATING, PAINTING MACH. OPER.
92951788	COATING, PAINTING SETTER/OPER.
93908800	COIL WINDERS, TAPERS, FINISHERS
85947602	COIN & VENDING MACHINE SERVICERS
65041389	COMB. FOOD PREPARATION, SERVICE
91508688	COMBINATION MACH.TOOL OPER., M/P
91505689	COMBINATION MACH.TOOL SET/OP,M/P
15023011	COMMUNICATION, TRANSP., UTIL.MGRS
21911028	COMPLIANCE & ENFORCE. INSPECTORS
56011295	COMPUTER OPERATORS, EXC. PERIPH.
25108231	COMPUTER PROGRAMMER AIDES
25105232	COMPUTER PROGRAMMERS
31226125	COMPUTER SCIENCE TEACHERS
25102076	COMPUTER SYSTEMS ANALYSTS, EDP
87311515	CONCRETE AND TERRAZZO FINISHERS
15017012	CONSTRUCTION MANAGERS
21908029	CONSTRUCTION, BUILDING INSPECTOR
97951863	CONVEYOR OPERATORS AND TENDERS
92917766	COOKING MACHINE OPER., FOOD/TOB.
65028383	COOKS, INSTITUTION OR CAFETERIA
62021423	COOKS, PRIVATE HOUSEHOLD
65026384	COOKS, RESTAURANT
65035386	COOKS, SHORT ORDER
65032387	COOKS, SPECIALTY FAST FOOD
92928784	COOLING, FREEZING EQUIP. OPER.
32311168	CORRECT. & MANUAL ARTS THERAPIST
63017430	CORRECTION OFFICERS AND JAILERS
55317368	CORRESPONDENCE CLERKS
21902030	COST ESTIMATORS
31514149	COUNSELORS
49017255	COUNTER AND RENTAL CLERKS
65017394	COUNTER ATTENDANTS
53702351	COURT CLERKS
97944865	CRANE AND TOWER OPERATORS
21105044	CREDIT ANALYSTS
53114352	CREDIT AUTHORIZERS
53117353	CREDIT CHECKERS

63028440	CRIMINAL INVESTIGATORS, FEDERAL
63044451	CROSSING GUARDS
92965767	CRUSHING & MIXING MACHINE OPER.
31511147	CURATORS, ARCHIVISTS, MUSEUM TECH
89505653	CUSTOM TAILORS AND SEWERS
55335354	CUSTOMER SERVICE REPS, UTILITIES
93926801	CUTTERS AND TRIMMERS, HAND
92944768	CUTTING & SLICING MACHINE OPER.
92941786	CUTTING AND SLICING SETTER/OPER.
92932769	DAIRY PROCESSING EQUIP. OPERATOR
34053173	DANCERS AND CHOREOGRAPHERS
56021356	DATA ENTRY KEYERS, COMPOSING
56017355	DATA ENTRY KEYERS, EX. COMPOSING
85705568	DATA PROCESSING EQUIP. REPAIRERS
49032267	DEMONSTRATORS, PROMOTERS, MODELS
66002398	DENTAL ASSISTANTS
32908193	DENTAL HYGIENISTS
89921675	DENTAL LABORATORY TECHNICIANS
32105152	DENTISTS
87914547	DERRICK OPERATORS, OIL & GAS
34038174	DESIGNERS, EXC. INTERIOR DESIGN.
89911676	DETAIL DESIGN DECORATORS & PAINT
32523194	DIETETIC TECHNICIANS
32521153	DIETITIANS AND NUTRITIONISTS
65014388	DINING ROOM & BARTENDER HELPERS
27505101	DIRECTORS, RELIGIOUS ACTIV./EDUC.
57105290	DIRECTORY ASSISTANCE OPERATORS
58002322	DISPATCHER: POLICE, FIRE, AMBULANCE
58005321	DISPATCHERS: EXC. POL., FIRE, AMB.
22514218	DRAFTERS
97926877	DRAGLINE OPERATORS
97928878	DREDGE OPERATORS, DIPPER TENDERS
91108691	DRILLING, BORING MACH. SET/OP., M/P
97117841	DRIVER/SALES WORKERS
87108517	DRYWALL INSTALLERS
56005298	DUPLICATING MACHINE OPERATORS
87902554	EARTH DRILLERS, EX. OIL & GAS
27102094	ECONOMISTS, MARKET ANALYSTS
15005013	EDUCATION ADMINISTRATORS
85711607	ELECTR. HOME APPL. & POWER TOOL
85911603	ELECTRIC METER INSTALLERS/REPAIR
85714571	ELECTRIC MOTOR REPAIRERS
22126055	ELECTRICAL & ELECTRONIC ENGINEER
22505213	ELECTRICAL & ELECTRONIC TECHN.
85728569	ELECTRICAL INSTALLERS & REPAIRER
85723570	ELECTRICAL POWERLINE INSTAL/RPR.
93905802	ELECTRICAL, ELECTRONIC ASSEMBLER
93114792	ELECTRICAL, ELECTRONIC ASSEMBLER
87202520	ELECTRICIANS
32926195	ELECTROCARDIOGRAPH TECHNICIANS
32923196	ELECTROENCEPHALOGRAPH TECHN.
91921711	ELECTROLYTIC PLATING OPER., M/P
91917712	ELECTROLYTIC PLATING SET/OP., M/P
93111793	ELECTROMECHANICAL EQ. ASSEMBLER
85908604	ELECTROMEDICAL & BIOMED. REPAIR.

92902770	ELECTRONIC SEMICONDUCTOR
85717573	ELECTRONICS REPAIRERS, COMM. & IND.
85932621	ELEVATOR INSTALLERS & REPAIRERS
67011459	ELEVATOR OPERATORS
39014244	EMBALMERS
32508197	EMERGENCY MEDICAL TECHNICIANS
21508033	EMPLOYMENT INTERVIEWERS
31222126	ENGINEERING TEACHERS
31216127	ENGLISH & FOREIGN LANG. TEACHERS
13017014	ENGLISH, MATH., NAT. SCI. MGR.
93951817	ENGRAVING AND PRINTING, HAND
22517219	ESTIMATORS & DRAFTERS, UTILITIES
97923879	EXCAVATION LOADING MACHINE OPER.
92971771	EXTRUDING & FORMING OPERATOR
92708745	EXTRUDING MACH. OPERATOR, FIBERS
91311692	EXTRUDING MACH. SETTER/OPER., M/P
92968787	EXTRUDING, FORMING SETTER/OPER.
73002489	FALLERS AND BUCKERS
31323136	FARM & HOME MANAGEMENT ADVISORS
85321596	FARM EQUIPMENT MECHANICS
79021496	FARM EQUIPMENT OPERATORS
71005481	FARM MANAGERS
74002477	FARM WORKERS
71002480	FARMERS
87817521	FENCE ERECTORS
55321336	FILE CLERKS
34032250	FILM EDITORS
25315045	FINANCIAL ANALYSTS, STATISTICAL
13002015	FINANCIAL MANAGERS
63008432	FIRE FIGHTERS
61002433	FIRE FIGHTING & PREV. SUPERVISORS
63001434	FIRE INSPECTORS
72002469	FIRST LINE SUPERV. AG., ETC.
81008502	FIRST LINE SUPERV.: PRODUCTION
81011503	FIRST LINE SUPERV.: TRANSPORT.
81005499	FIRST LINE SUPERV.: CONST. EXTRAC.
81017500	FIRST LINE SUPERV.: HELP, LABORERS
81002501	FIRST LINE SUPERV.: MECH. & REPAIR
51002369	FIRST LINE SUPERVISORS, CLERICAL
41002268	FIRST LINE SUPERVISORS, SALES
63041445	FISH AND GAME WARDENS
77005484	FISHERS, HUNTERS, AND TRAPPERS
68026415	FLIGHT ATTENDANTS
87605538	FLOOR LAYERS, EX. CARPET, WOOD, TILE
89808630	FOOD BATCHMAKERS
65038390	FOOD PREPARATION WORKERS
65011395	FOOD SERVERS, OUTSIDE
15026006	FOOD SERVICE & LODGING MANAGERS
79002490	FOREST AND CONSERVATION WORKERS
63005436	FOREST FIRE INSPECT & PREVENTION
24302080	FORESTER, CONSERVATION SCIENTIST
91317693	FORGING MACHINE SETTER/OPER., M/P
89902677	FOUNDRY MOLD AND CORE MAKERS
91914713	FOUNDRY MOLD ASSEMBLY/SHAKEOUT
85505562	FRAME WIRERS, CENTRAL OFFICE

68041461	FUNERAL ATTENDANTS
39011245	FUNERAL DIRECTORS AND MORTICIANS
91935714	FURNACE OPERATORS AND TENDERS
92923772	FURNACE, KILN, OVEN, KETTLE OPER.
89314663	FURNITURE FINISHERS
79014474	GARDENERS AND GROUNDSKEEPERS
85944608	GAS APPLIANCE REPAIRERS
95005829	GAS PLANT OPERATORS
97917881	GAS PUMPING STATION OPERATORS
95017823	GAUGERS
19005016	GENERAL MANAGERS AND TOP EXEC.
55347357	GENERAL OFFICE CLERKS
24111089	GEOLOGIST, GEOPHYSICIST, OCEANOGR.
93911803	GLAZIER, MANUFACTURING
87811522	GLAZIERS
97938871	GRADER, DOZER, SCRAPER OPERATORS
79011475	GRADERS & SORTERS, AGRIC. PRODUCT
31117137	GRADUATE ASSISTANTS, TEACHING
93953818	GRINDING AND POLISHING, HAND
91114694	GRINDING, BUFFING MACH. SET/OP. M/P
63047453	GUARDS AND WATCH GUARDS
68017416	GUIDES
68005412	HAIRDRESSERS AND COSMETOLOGISTS
98902905	HAND PACKERS AND PACKAGERS
87308523	HARD TILE SETTERS
92305756	HEAD SAWYERS
31212128	HEALTH SPECIALTIES TEACHERS
91932717	HEAT TREATING, TEMPERING MACH. OP.
91938715	HEATERS, METAL AND PLASTIC
91928716	HEATING EQUIP. SETTER/OPER. M/P
85902605	HEATING, A/C, REFRIG. MECHANICS
98319898	HELPERS, ALL OTHER CONSTRUCTION
98312893	HELPERS, CARPENTERS
98313894	HELPERS, ELECTRICIANS
98323899	HELPERS, EXTRACTIVE WORKERS
98311892	HELPERS, MASONS & TILE SETTERS
98314895	HELPERS, PAINTERS, PLASTERERS
98315896	HELPERS, PLUMBERS, PIPEFITTERS
98316897	HELPERS, ROOFERS
87711524	HIGHWAY MAINTENANCE WORKERS
97941866	HOIST AND WINCH OPERATORS
85708572	HOME ENTERTAINMENT EQ. REPAIRERS
66011418	HOME HEALTH AIDES
65002391	HOSTS & HOSTESSES: REST., LOUNGE
53808308	HOTEL DESK CLERKS
62031424	HOUSEKEEPERS AND BUTLERS
61008457	HOUSEKEEPERS, INSTITUTIONAL
22508214	INDUSTRIAL ENGINEERING TECHN.
22128056	INDUSTRIAL ENGINEERS, EXC. SAFETY
15014017	INDUSTRIAL PRODUCTION MANAGERS
97947867	INDUSTRIAL TRUCK & TRACTOR OPER.
83002669	INSPECTORS, TESTERS, AND GRADERS
31517142	INSTRUCTIONAL COORDINATORS
31321139	INSTRUCTORS AND COACHES, SPORTS
31317138	INSTRUCTORS, ADULT NONVOC. EDUC.

87802525	INSULATION WORKERS
53302280	INSURANCE ADJUSTERS, INVESTIGATOR
53305281	INSURANCE APPRAISERS, AUTO DAMAG
53311282	INSURANCE CLAIMS CLERKS
53308283	INSURANCE EXAMINING CLERKS
53314284	INSURANCE POLICY PROCESS. CLERKS
43002256	INSURANCE SALES WORKERS
34041251	INTERIOR DESIGNERS
55332370	INTERVIEWING CLERKS, EX. PERSONNEL
53505371	INVESTIGATORS, CLERICAL
67005376	JANITORS AND CLEANERS, EXC. MAIDS
89123637	JEWELERS AND SILVERSMITHS
89705651	JOB PRINTERS
28102109	JUDGES AND MAGISTRATES
22308071	LANDSCAPE ARCHITECTS
91105695	LATHE, TURNING MACH. SETTER/OP, M/P
87114519	LATHERS
92726746	LAUNDRY, DRYCLEANING MACH. OPER.
28302234	LAW CLERKS
28108110	LAWYERS
31111122	LECTURERS
55102343	LEGAL SECRETARIES
92515731	LETTERPRESS SETTER/OPERATOR
31502148	LIBRARIANS, PROFESSIONAL
53902337	LIBRARY ASSISTANTS & BOOKMOBILE
53708285	LICENSE CLERKS
32505198	LICENSED PRACTICAL NURSES
31202129	LIFE SCIENCE TEACHERS
53121358	LOAN AND CREDIT CLERKS
53111372	LOAN INTERVIEWERS
21108046	LOAN OFFICERS AND COUNSELORS
85923609	LOCKSMITHS AND SAFE REPAIRERS
97305845	LOCOMOTIVE ENGINEERS
97311846	LOCOMOTIVE FIRERS
79008492	LOG GRADERS AND SCALERS
73008493	LOG HANDLING EQUIPMENT OPERATORS
73011491	LOGGING TRACTOR OPERATORS
97902882	LONGSHORE EQUIPMENT OPERATORS
92926762	LOW PRESSURE BOILER OPERATOR
93902804	MACHINE ASSEMBLERS
93105795	MACHINE BUILDERS
98502900	MACHINE FEEDERS AND OFFBEARERS
91321696	MACHINE FORMING OPERATORS, M/P
91117697	MACHINE TOOL CUTTING OPER., M/P
85128584	MACHINERY MAINTENANCE WORKERS
85118581	MACHINERY MECHANICS: PLANT
85113579	MACHINERY MECHANICS: SEWING MACH
85116578	MACHINERY MECHANICS: MARINE EQUIP
85112580	MACHINERY MECHANICS: TEXTILE MACH
89108639	MACHINISTS
67002377	MAIDS AND HOUSEKEEPING CLEANERS
57302315	MAIL CLERKS, EXC. MAIL MACHINE
56008301	MAIL MACHINE OPERATORS
97914883	MAIN LINE STATION ENGINEERS
85132585	MAINTENANCE REPAIRERS, GEN. UTIL.

21905047	MANAGEMENT ANALYSTS
68008413	MANICURISTS
22305066	MARINE ARCHITECTS
22138067	MARINE ENGINEERS
13011018	MARKETING, ADV., PUBLIC REL.MGRS
58021332	MARKING CLERKS
97504853	MATES AND ABLE SEAMEN
31224130	MATHEMATICAL SCIENCE TEACHERS
25323225	MATHEMATICAL TECHNICIANS
25319086	MATHEMATICIANS, ALL OTH.MATH.SCI
93938805	MEAT, POULTRY, FISH CUTTERS
98102908	MECHANIC AND REPAIRER HELPERS
85928610	MECHANICAL CONTROL INSTALLERS
22511215	MECHANICAL ENGINEERING TECHN.
22135057	MECHANICAL ENGINEERS
32905200	MED./CLINICAL LAB. TECHNICIANS
32902201	MED./CLINICAL LAB. TECHNOLOGISTS
89923683	MEDICAL APPLIANCE MAKERS
66005399	MEDICAL ASSISTANTS
32911202	MEDICAL RECORDS TECHN.& TECHNOL.
24311081	MEDICAL SCIENTISTS
55105344	MEDICAL SECRETARIES
15008019	MEDICINE AND HEALTH SERV. MGRS
85956611	MENDERS, GARMENTS AND LINENS
34044175	MERCHANDISE DISPLAYERS
57311316	MESSENGERS
91911718	METAL MOLDING, CASTING OPERATOR
91908719	METAL MOLDING,CASTING SETTER/OP.
93948106	METAL POURERS, BASIC SHAPES
22105058	METALLURGISTS AND REL. ENGINEERS
24108090	METEOROLOGISTS
58014323	METER READERS, UTILITIES
91111698	MILLING,PLANING MACH.SET/OP.,M/P
85123586	MILLWRIGHTS
87943548	MINE CUTTING MACHINE OPERATORS
15021020	MINING AND RELATED MANAGERS
22108059	MINING ENGINEERS, INC. SAFETY
85314597	MOBILE HEAVY EQUIPMENT MECHANICS
85938612	MOBILE HOME REPAIRERS
89905678	MOLDERS & SHAPERS, EXC. JEWELRY
93944807	MOLDERS AND CASTERS, HAND
92905773	MOTION PICTURE PROJECTIONISTS
97511884	MOTORBOAT OPERATORS
85308594	MOTORCYCLE REPAIRERS
53705359	MUNICIPAL CLERKS
34047177	MUSIC DIRECTORS, SINGERS, & REL.
85921613	MUSICAL INSTRUMENT REPAIR & TUNE
34051178	MUSICIANS, INSTRUMENTAL
53105309	NEW ACCOUNTS CLERKS
91926720	NONELECTROLYTIC PLATING OPER.M/P
91923721	NONELECTROLYTIC PLATING SET.,M/P
22117060	NUCLEAR ENGINEERS
32914204	NUCLEAR MEDICINE TECHNOLOGISTS
91502686	NUMERICAL CONTROL MACH.TOOL, M/P
79005478	NURSERY WORKERS

66008401	NURSING AIDES AND ORDERLIES
31114143	NURSING INSTRUCTORS
32305162	OCCUPATIONAL THERAPISTS
66021403	OCCUPATIONAL THERAPY ASSISTANTS
85926614	OFFICE MACHINE, REGISTER SERVICER
92512732	OFFSET LITHOGRAPHIC PRESS SETTER
97956870	OPERATING ENGINEERS
25302252	OPERATIONS AND SYSTEMS ANALYSTS
89917684	OPTICAL GOODS WORKERS
32514154	OPTICIANS, DISPENSING & MEASUR.
32108155	OPTOMETRISTS
55323338	ORDER CLERKS: MATERIALS, SERVICE
58026324	ORDER FILLERS, SALES
97517856	ORDINARY SEAMEN & MARINE OILERS
83004670	OTHER INSPECTORS, TESTER, GRADER
92974774	PACKAGING & FILLING MACHINE OPER
87402526	PAINTERS AND PAPERHANGERS
92947776	PAINTERS, TRANSPORTATION EQUIP.
93947808	PAINTING AND COATING, HAND
92914777	PAPER GOODS MACHINE SETTER/OPER.
28305235	PARALEGAL PERSONNEL
63021446	PARKING ENFORCEMENT OFFICERS
97808860	PARKING LOT ATTENDANTS
89114640	PATTERN AND MODEL MAKERS, METAL
89302664	PATTERN AND MODEL MAKERS, WOOD
89305667	PATTERN MARKERS, WOOD
89502654	PATTERNMAKERS AND LAYOUT WORKERS
89908679	PATTERNMAKERS, MODEL MAKERS
87708540	PAVING, SURFACING, TAMPING
55341306	PAYROLL AND TIMEKEEPING CLERKS
56014296	PERIPHERAL EDP EQUIP. OPERATORS
55314339	PERSONNEL CLERKS, EXCEPT PAYROLL
21511034	PERSONNEL, TRAIN., LABOR REL. SPEC
13005021	PERSONNEL, TRAINING, LABOR REL. MGR
67008378	PEST CONTROLLERS AND ASSISTANTS
95011830	PETROLEUM PUMP SYSTEM OPERATORS
95014824	PETROLEUM REFINERY OPERATORS
24511221	PETROLEUM TECHNICIANS & TECHNOL.
32517156	PHARMACISTS
66026404	PHARMACY ASSISTANTS
92521737	PHOTOENGRAVING & LITH. PHOTOGRA.
92545736	PHOTOENGRAVING & LITHOG. OPER.
34023181	PHOTOGRAPHERS
89914680	PHOTOGRAPHIC PROCESS WORKERS
92908778	PHOTOGRAPHIC PROCESSING MACH. OP.
32308163	PHYSICAL THERAPISTS
66017405	PHYSICAL, CORRECT. THERAPY ASSIST
32511158	PHYSICIAN ASSISTANTS
32102159	PHYSICIANS AND SURGEONS
24102091	PHYSICISTS AND ASTRONOMERS
31206131	PHYSICS TEACHERS
87705541	PILE DRIVING OPERATORS
87508527	PIPELAYERS
87317529	PLASTERERS AND STUCCO MASONS
91905722	PLASTIC MOLDING, CASTING OPER.

91902723	PLASTIC MOLDING, CASTING SET/OP.
87502530	PLUMBER, PIPEFITTER, STEAMFITTER
32111157	PODIATRISTS
61005438	POLICE AND DETECTIVE SUPERVISORS
63011441	POLICE DETECTIVES
63014442	POLICE PATROL OFFICERS
93928809	PORTABLE MACHINE CUTTERS
57305317	POSTAL MAIL CARRIERS
57308318	POSTAL SERVICE CLERKS
15002007	POSTMASTERS, MAIL SUPERINTENDENT
95028825	POWER DISTRIBUTORS & DISPATCHERS
95021831	POWER GENERATING PLANT OPERATOR
95026832	POWER REACTOR OPERATORS
85721622	POWERHOUSE & RELAY ELECTRICIANS
89702648	PRECISION COMPOSITOR, TYPESETTER
89521658	PRECISION DYERS
89128634	PRECISION ETCHERS AND ENGRAVERS
89126635	PRECISION HAND WORKERS, JEWELRY
89105636	PRECISION INSTRUMENT MAKERS
85905615	PRECISION INSTRUMENT REPAIRERS
89117638	PRECISION LAYOUT WORKERS, METAL
89708649	PRECISION LITHOGRAPHERS & PHOTO.
91305699	PRESS, BRAKE MACH. SETTER/OP., M/P
89517659	PRESSERS, DELICATE FABRICS
93921810	PRESSERS, HAND
92728747	PRESSING MACH. OPERATOR, TEXTILES
92543733	PRINTING PRESS MACHINE OPERATOR
92510735	PRINTING PRESS MACHINE SETTER/OP
63035452	PRIVATE DETECTIVE & INVESTIGATOR
55326325	PROCUREMENT CLERKS
34056182	PRODUCERS, ACTORS, ENTERTAINERS
83005671	PRODUCTION INSPECTORS, GRADERS
58008326	PRODUCTION, EXPEDITING CLERKS
25111240	PROGRAMMERS: NUMERICAL, TOOL
53911360	PROOFREADERS AND COPY MARKERS
15011022	PROPERTY, REAL ESTATE MANAGEMENT
66014402	PSYCHIATRIC AIDES
27108095	PSYCHOLOGISTS
19002008	PUBLIC ADMIN., LEG., GEN. ADMIN.
34008183	PUBLIC RELATIONS SPECIALISTS
97953885	PUMP OPERATORS
91302700	PUNCHING MACH. SETTER/OPER., M/P
21308037	PURCHASING AGENT EX.WHO/RET/FARM
21305048	PURCHASING AGENTS & BUYERS, FARM
13008023	PURCHASING MANAGERS
85514563	RADIO MECHANICS
39008241	RADIO OPERATORS
32921205	RADIOLOGIC TECHNICIANS
32917206	RADIOLOGIC TECHNOLOGISTS
85317598	RAIL CAR REPAIRERS
97308849	RAIL YARD ENGINEERS, DINKEY OPER.
87714531	RAIL-TRACK LAYING EQUIP. OPER.
97317847	RAILROAD BRAKE, SIGNAL, SWITCH
97302848	RAILROAD CONDUCTORS, YARDMASTERS
63038455	RAILROAD POLICE & SPECIAL AGENTS

43011260	REAL ESTATE APPRAISERS
53914361	REAL ESTATE CLERKS
55305310	RECEPTIONISTS, INFORMATION CLERKS
32317164	RECREATION THERAPISTS
27311102	RECREATION WORKERS
85126542	REFRACTORY MATERIAL REPAIRERS
98705902	REFUSE COLLECTORS
32502160	REGISTERED NURSES
87314535	REINFORCING METAL WORKERS
34011187	REPORTERS AND CORRESPONDENTS
53805312	RESERVATION & TRANS. TICKET AGENT
32302165	RESPIRATORY THERAPISTS
85935616	RIGGERS
92921779	ROASTING, DRYING OPER., FOOD/TOB.
87908556	ROCK SPLITTERS, QUARRY
91314701	ROLLING MACHINE SETTER/OPER., M/P
87808532	ROOFERS
87911550	ROTARY DRILL OPERATORS
87921551	ROUSTABOUTS
22132063	SAFETY ENGINEERS, EXCEPT MINING
43023270	SALES AGENTS, ADVERTISING
43017271	SALES AGENTS, BUSINESS SERVICES
43008259	SALES AGENTS, REAL ESTATE
49002272	SALES ENGINEERS
49005274	SALES REPS, SCIENTIF. PROD. EXC. RET
49008269	SALES REPS. EXC. SCIENTIF & RETAIL
49014273	SALESPERSONS, PARTS
49011261	SALESPERSONS, RETAIL
91102702	SAVING MACH. TOOL SETTER/OP., M/P
92302758	SAWING MACHINE SETTER/OPERATOR
92308757	SAWING MACHING OPERATOR/TENDER
92524738	SCREEN PRINTING MACH. SETTER/OP.
43014262	SECURITIES, FINANCIAL SERV. SALES
92962780	SEPARATING, FILTERING MACH. OP.
87511533	SEPTIC TANK, SEWER SERVICERS
97805861	SERVICE STATION ATTENDANTS
93923811	SEWERS, HAND
92721749	SEWING MACH. OPER., NON-GARMENT
92717748	SEWING MACH. OPERATOR, GARMENT
68011414	SHAMPOOERS
91308703	SHEAR, SLITTER MACH. SET/OP., M/P
87805543	SHEET METAL DUCT INSTALLERS
89132641	SHEET METAL WORKERS
63031447	SHERIFFS, DEPUTIES, U.S. MARSHALLS
97521858	SHIP ENGINEERS
97508857	SHIP PILOTS
89121642	SHIPFITTERS
89511655	SHOE AND LEATHER WORKERS
92723750	SHOE SEWING MACHINE OPERATOR
85511564	SIGNAL OR TRACK SWITCH MAINT.
89802629	SLAUGHTERERS AND BUTCHERS
85328599	SMALL ENGINE SPECIALISTS
31210132	SOCIAL SCIENCE TEACHERS
27308419	SOCIAL SERVICE TECHNICIANS
68035420	SOCIAL WELFARE SERVICE AIDES

27302104	SOCIAL WORKER, MED.&PSHYCHIATRIC
27305105	SOCIAL WORKERS, EX. MED.& PSYCH.
93917819	SOLDERERS AND BRAZERS
91708707	SOLDERING, BRAZING MACH. SET/OP.
91711706	SOLDERING, BRAZING MACHINE OPER.
21505035	SPECIAL AGENTS, INSURANCE
92522741	SPECIALTY MATERIALS PRINTING
32314166	SPEECH PATHOLOGISTS,AUDIOLOGISTS
89514660	SPOTTERS, DRY CLEANING
53126340	STATEMENT CLERKS
95032826	STATIONARY ENGINEERS
55328362	STATISTICAL CLERKS
25312085	STATISTICIANS
55302346	STENOGRAPHERS
98702909	STEVEDORES, EXC. EQUIPMENT OPER.
49021263	STOCK CLERKS, SALES FLOOR
58023327	STOCK CLERKS:STOCKROOM OR WAREH.
87305509	STONE MASONS
91714705	STRUCTURAL METAL FABRICATORS
93108794	STRUCTURAL METAL FITTERS
87814536	STRUCTURAL METAL WORKERS
32928207	SURGICAL TECHNICIANS
22311073	SURVEYING AND MAPPING SCIENTISTS
22521074	SURVEYING AND MAPPING TECHNICIAN
57102291	SWITCHBOARD OPERATORS
87111518	TAPERS
21914039	TAX EXAMINER, COLLECTOR, REV. AGENT
21111040	TAX PREPARERS
97114839	TAXI DRIVERS AND CHAUFFEURS
53904363	TEACHER AIDES & EDUC. ASSISTANTS
31521365	TEACHERS AIDES, PARAPROFESSIONAL
31305114	TEACHERS, ELEMENTARY
31308117	TEACHERS, SECONDARY SCHOOL
31311144	TEACHERS, SPECIAL EDUCATION
31314140	TEACHERS, VOCATIONAL EDUCATION
31302113	TEACHERS,PRESCHOOL & KINDERGARTN
31505242	TECHNICAL ASSISTANTS, LIBRARY
34005189	TECHNICAL WRITERS
57111292	TELEGRAPH AND TELETYPE OPERATORS
85726574	TELEPH. STATION INSTALL.& REPAIR
85702575	TELEPHONE & CABLE TV INSTAL/RPR.
53102366	TELLERS
92711752	TEXTILE DRAW-OUT MACH. OPERATOR
92714751	TEXTILE DYEING MACHINE OPERATOR
92705753	TEXTILE MACHINE OPERATORS
92702754	TEXTILE MACHINE SETTER/OPERATOR
92911781	TIRE BUILDING MACHINE OPERATOR
85953617	TIRE REPAIRERS AND CHANGERS
28311237	TITLE EXAMINERS AND ABSTRACTORS
28308238	TITLE SEARCHERS
89102643	TOOL AND DIE MAKERS
89111645	TOOL GRINDERS, FILERS, SHARPENERS
39005246	TRAFFIC TECHNICIANS
58028328	TRAFFIC, SHIPPING, & REC. CLERKS
53108299	TRANSIT CLERKS

58011329	TRANSPORTATION AGENTS
68028462	TRANSPORTATION ATTENDANTS
83008672	TRANSPORTATION INSPECTORS
43021264	TRAVEL AGENTS
53802313	TRAVEL CLERKS
97102843	TRUCK DRIVERS, HEAVY
97105842	TRUCK DRIVERS, LIGHT
92541739	TYPESETTING MACH. OPERATOR/TEND.
55307347	TYPISTS
55311349	TYPISTS, WORD PROCESSING EQUIP.
21102041	UNDERWRITERS
89508656	UPHOLSTERERS
27105097	URBAN AND REGIONAL PLANNERS
68021421	USHERS, LOBBY ATT., TICKET TAKER
98905906	VEHICLE, EQUIPMENT CLEANERS
49026275	VENDORS, SOLICITORS, DOOR-TO-DOOR
32114169	VETERINARIANS, VET. INSPECTORS
65008392	WAITERS AND WAITRESSES
68032463	WARDROBE & DRESS ROOM ATTENDANTS
93117796	WATCH, CHRONOMETER ASSEMBLERS
85917618	WATCHMAKERS
95002827	WATER & WASTE TREAT. PLANT OPER.
58017330	WEIGHERS, MEASURERS, CHECKERS
93914812	WELDERS AND CUTTERS
91705708	WELDING MACHINE OPERATORS
91702709	WELDING MACHINE SETTER/OPERATOR
53502286	WELFARE ELIGIBILITY WORKERS
21302038	WHOLESALE, RETAIL BUYERS, EX. FARM
89308665	WOOD MACHINISTS
92314759	WOODWORKING MACHINE OPERATORS
92311760	WOODWORKING MACHINE SETTER/OPER.
34002190	WRITERS AND EDITORS

WISCONSIN OCCUPATIONAL PROJECTIONS TO 1995

If you have any comments or questions on anything in this publication, or desire additional copies, write to:

DILHR Labor Market Information
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Madison, Wisconsin 53707

(608) 267-9607

TO: Users of Projections

FROM: Jerry Snow, Chief of Analysis and Publications Section

SUBJECT: Use of Projections

We are often asked to what uses our projections are put. We invite you to fill out the sheet below and return it to us.

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Labor Market Information Bureau
P. O. Box 7944
Madison, Wisconsin 53707

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- ☐ Training
- ☐ Other _____